

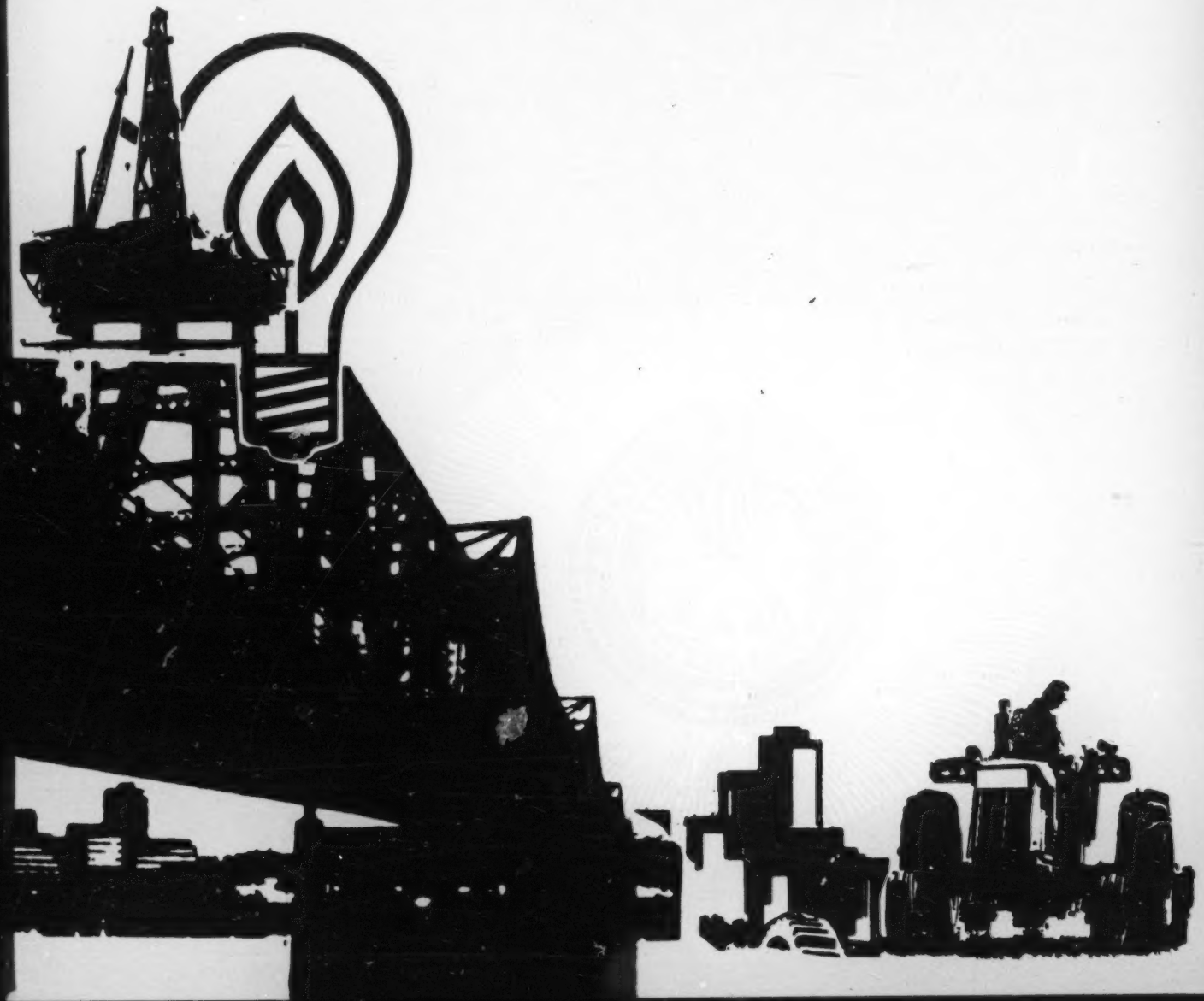
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# LOUISIANA BUSINESS REVIEW

Louisiana State University,  
Baton Rouge

## Louisiana's Economic Predictions





## LETTER FROM THE EDITORIAL BOARD

Lucy VanPelt, the pugnacious little brunette cartoon character in Charles Schultz's comic strip *Peanuts*, was once reminded that life was filled with ups and downs. "Why?" was her outraged response, "Why is life filled with ups and downs? Why can't life be filled with ups and ups? And ups . . . and UPS . . . and UPS!"

*Life isn't that way, of course, and, unfortunately, neither is the Louisiana economy. In order to present a picture of what the future holds for the state economy, the Louisiana Business Review presents the third annual set of projections of the Louisiana Econometric Model (LEM). Professor Loren C. Scott, chairman of the LSU Department of Economics, Professor James A. Richardson, director of the Public Administration Institute, and Dr. A. M. M. Jamal, research economist in the Division of Research and Development, constructed the LEM under a 1981 grant awarded by the Board of Regents. The model is composed of a series of mathematical equations describing the Louisiana economy and can be used to predict the performance of the state's economy in a number of areas, such as employment, income, energy production, energy consumption, and the activity of financial institutions in Louisiana. This issue's lead article is a discussion of the most recent projections of the model, and, according to the developers of the model, "the news is neither good nor bad but rather better."* Predicting Louisiana economic performance in 1985 and 1986, the authors conclude that the modest recovery taking place in 1984 will be followed by a slightly stronger recovery during the coming two years.

Importantly, it must be stressed that underlying this prediction of recovery and economic growth are two key assumptions: first, that the national economic recovery will continue, and, second, that the price of oil will remain stable at approximately \$29 to \$30 per barrel.

The *Wharton Econometric Model*, incorporated as the national economic component of the LEM, projects a healthy rate of growth for the United States in 1985 and 1986; a slow rise in the rate of inflation to approximately 5.6 percent in 1986; a short-term rise and then a small drop in interest rates during the coming two years. The developers of the LEM believe the Wharton projections to be slightly pessimistic, and, as a consequence, that the LEM forecasts "represent a conservative estimate of Louisiana's recovery."

Louisiana was particularly hard hit during the recent recession. The economic downturn was exacerbated by the destabilization of oil-prices and of energy markets in general. Between December 1981 and June 1984, employment in oil and gas production fell by roughly 25 percent. Concomitant decreases were seen in the petrochemical and transportation equipment manufacturing industries in Louisiana. Given the dependence of personal income and state tax revenues on performance in these basic industries, recovery is expected to be slow but steady. The Recovery is also expected to spread to feeder industries such as services, retail trade, and banking.

The major predictions of the 1984 LEM can be summarized as follows:

- employment in all major sectors of the economy is expected to increase; real income should rise at a rate of 3.0 percent in 1985 and a more moderate 1.8 percent in 1986;
- time and demand deposits, which increased dramatically during recessionary 1982 and 1983, were responding to federal deregulation of financial institutions; as a consequence, "substantial funds were shifted from mutual funds and similar instruments into banks and thrifts"; in the future, however, growth in deposits is projected to parallel growth in personal income;
- the cutback in working oil and

- gas rigs seen in 1982 and 1983 has ended and the number of working rigs is expected to increase through 1986; nonetheless, due to a two-year lag between rig installation and oil and gas extraction, production is expected to continue to fall throughout the forecast period;
- state severance tax revenues, dependent on oil and gas production and prices, are expected to fall during the coming two years; even if offshore production rises as a result of the increase in working rigs, much of the drilling will take place in federal lands, outside Louisiana's taxing jurisdiction;
- due to renegotiation of GSU's natural gas contract with Exxon, utility rates will increase for about one-third of Louisiana's electricity consumers in January, 1985; similar increases may appear in the rates charged by LPL and NPSI when the nuclear power plant at Grand Gulf comes on line; these higher electricity costs are expected to have a dampening effect on the economic recovery;
- the prediction of a modest recovery for Louisiana extends to most of the metropolitan areas of the state; those metropolitan areas with diversified economic bases are expected to experience a steadier growth trend than those dependent on a single major industry;
- Lafayette and Lake Charles experienced the largest reductions in employment and income during the recent recession; continued uncertainty in energy markets will have its strongest impact on income and employment in these two areas of the state; Lafayette will suffer most if there is an additional and substantial decline in oil and gas prices; Lake Charles' petrochemical industry, on the other hand, would benefit from a decline in oil and gas prices; since

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The Editorial Board invites the submission of manuscripts to be considered for publication in this quarterly. Style sheets for manuscripts and manuscript abstracts are available upon request. Comments and suggestions on any material appearing in the LBR are also welcome.

All communications and address changes should be sent to the editor, Louisiana Business Review, Division of Research, College of Business Administration Louisiana State University, Baton Rouge, LA, (504) 388-6645.

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## LETTER

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these products serve as inputs in the industry.

These and other findings of the team of researchers are presented in greater detail in the lead article. The econometric forecast includes an executive summary of the findings of Scott, Richardson, and Jamal.

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Annual reports until recently were mere historical documents, consisting of a brief summary of the year's events and a financial statement that was intended to receive only a cursory glance. Today's annual reports, however, have come to resemble high-quality magazines and often may be considered corporate promotion pieces or advertising.

Many annual reports thematically communicate their corporations' business philosophies and goals in addition to the obligatory facts and figures. These reports not only explain how the firm achieved its earnings and how it met the year's challenges, but also define the company's philosophy of business, its long-term aims, and the year's progress toward reaching these goals.

Editors of financial annual reports are faced with their primary problem of presenting statistical data in an interesting and understandable form. Most companies provide generous budgets for the preparation of annual reports, but ingenuity on the part of the editor is vital if expenditures are to be translated into reader response.

This issue's *FORUM* article, *Annual Report Research: Implications for Writers* was written by Rutgers Associate Professor Gail E. Farrelly and University of Richmond Assistant Professor Gail B. Wright. Their article emphasizes the managerial viewpoint, summarizes some recent research relevant to corporate annual reporting, and provides practical suggestions to aid report editors in preparing more effective publications for their organizations.

## COLLEGE HIGHLIGHTS



The dissertation written by **Mine Yucel** (economics) while a student at Rice University has been presented the *Gardner Award* for best dissertation in the fields of humanities and social sciences at that university.

**Stephen Farber** (economics) is co-investigator on a \$72,000 grant from the Louisiana Department of Natural Resources and a \$20,000 grant from the Louisiana Universities Marine Consortium to study the economic impact of the coastal areas of Louisiana's eroding coastline.

**James A. Richardson**, professor of economics, has been named director of *LSU's* Public Administration Institute.

**Leonard J. Baumgarten** has been appointed director of the *CEBA Placement Office*. He is an experienced professional management consultant specialized in interactive learning services. Baumgarten previously directed placement services at the University of Wyoming.

Economics Professor **William Campbell** recently was elected to a three-year term on the Philadelphia Society's Board of Directors.

Alumni Professor of Economics **Herman Daly** presented invited lectures at West Berlin, London, James Madison University, and the University of Colorado this past year. One of his works has been translated into Portuguese and published by Mercado Aberto of Brazil.

**Carol Dahl** presented an invited lecture on the effects of the Soviet gas pipeline in Europe at a July conference in London.

**Loren C. Scott** was appointed recently as the new Chairman of the Economics Department.

Several new faculty members were added to the Economics Department this fall. **Eden Yu** and **Carol Dahl** were appointed associate professors, **Faik Koray** was named assistant professor, and **Geoffrey Turnbull** was appointed to a visiting assistant professorial position.

Economics Professor **Pat Culbertson** participated in the prestigious seminar, *"Recent Developments in Applied Economics,"* sponsored by the University of Chicago and funded by General Electric Corporation.

**James Werbel** was recently appointed as assistant professor of management.

**Ronald F. Bush** (marketing) was elected president of the Southern Marketing Association and named program chairman for the group's 1985 annual conference at Orlando, FL.

**Thomas Gullede** (quantitative business analysis) has been awarded the 1984 *United States Air Force Of-*

fice of Scientific Research Faculty Research Fellowship at the Business Research Management Center, Wright-Patterson Air Force Base, Ohio.

**Jerry A. Wallin** (management) was an invited guest and participant in General Motors Institute's International Symposium on Human Behavior and Safety at Warren, MI, in September.

#### Publication

**Ronald F. Bush** (marketing) had his paper, "The Brand Trademark: A Valuable and Vulnerable Resource," published in the *American Marketing Association's 1984 Proceedings*.

**Thomas Gullledge** (quantitative business analysis) had his article, "Learning and Costs in Airframe Production: A Multiple Output Production Function Approach," co-authored with N. K. Womer, Clemson University, and J. R. Dorroh, LSU mathematics, in Vol. 31 of *The Naval Research Logistics Quarterly*. Gullledge and **J. E. Willis**, also of quantitative business analysis, co-authored "The Relationship Between Price and Volume of Contracts on the Wheat Futures Market," in *Time Series Analysis: Theory and Practice 7*, edited by Oliver D. Anderson (Amsterdam: North-Holland, 1984).

Assistant Professor of Quantitative Business Analysis **Kwei Tang** co-authored an article, "Multivariate Bayesian Acceptance Sampling Plans for Screening and Scrapping Rejected Lots," with Herbert Moskowitz and Robert Plante, Purdue University; and Arunachalam Ravindran, University of Oklahoma; in the June issue of *IIE Transactions*.

**Jerry A. Wallin** (management) had his papers, "Some Thoughts on the Advantages and Problems with Management by Objectives," pub-

lished in the March *Personnel Selection and Training Bulletin*; "Improving Safety Through Applied Behavioral Analysis," in the November *Journal of Safety Research*; and "Occupational Safety: A Comparison of a Behaviorally Specific and a Traditional Safety Program," in the November *Proceedings of the 16th Annual American Institute for Decision Science*. Wallin and **Jagdeep S. Chokar** (management) co-authored a paper, "A Field Study of the Effect of Feedback Frequency on Performance," in the August issue of the *Journal of Applied Psychology*.

**Eden S. H. Yu**, associate professor of economics, co-authored the following published articles: "Gains from Trade under Variable Returns to Scale" with J. Y. Choi of Lamar University at Beaumont for the April 1984 *Southern Economic Journal*; "Customs Unions under Increasing Returns to Scale" with Choi for the May 1984 *Economica*; and "On the Relationship Between Energy and GNP: Further Results" with B. K. Hwang of the University of Oklahoma for the July 1984 *Energy Economics*.

**Stephen W. Looney**, assistant professor of quantitative business analysis, **Michael H. Peters**, department chairman, and **William W. Williams**, associate dean, co-authored an article, "Use of Curtailed Sampling Plans in the Economic Design of np-Control Charts," for the February 1985 issue of *Technometrics*. Looney also recently presented a paper to the 1984 Joint Statistical Meetings at Philadelphia entitled "Uses of the Cumulant Generating Function in an Introductory Statistical Theory Course."

**Faik Koray**, assistant professor of economics, co-authored with Kent P. Kimbrough of Duke University "Money, Output, and the Trade Base", appearing in the August 1984

*Canadian Journal of Economics*.

Economics Professor **Robert Newman's** book, *Growth in the American South*, was published recently by the New York University Press.

#### Papers

**Avijit Banerjee**, assistant professor of quantitative business analysis, presented his paper, "A Chance-constrained Model for Aggregate Planning in a Rolling Schedule Environment," at the 10th Triennial Conference on Operations Research of the International Federation of Operational Research Societies in August at Washington, D.C.

**Carol A. Dahl** (economics) presented her paper, "Energy Modeling: The State of the Art," at the Fourth Forecasting Symposium at London in July. Her paper, "Do Gasoline Demand Elasticities Vary? A Reply," will be published in a forthcoming issue of *Land Economics*.

**Roger L. Burford** (quantitative business analysis) presented his paper, co-authored with Joseph L. Katz of Georgia State University, "Short-cut Formulas for Estimation of Multiregional Input-Output Multipliers," to the Second World Congress on Regional Science at Rotterdam in June. He also recently presented two papers to the national meeting of the American Statistical Association at Philadelphia: "Estimation of Time to Absorption and Variances, with Limited Information," (co-authored with Katz) and "Random Variate Generators for Micro-computers."

**James Werbel** (management) presented a paper to the National Academy of Management on the "Impact of Spouse Employment upon Career Advancement."



## BOOK CORNER

*Arbitration Promise and Performance*, edited by James L. Stern and Barbara D. Dennis (Washington, D.C.: Bureau of National Affairs, Inc., 1984); 294 pp.; \$30 (hard-cover).

This book is a compilation of presentations made at the Thirty-sixth Annual Meeting of the National Academy of Arbitrators at Quebec in May 1983. The National Academy is a professional association of arbitrators who have attained a certain experience level and have been recommended to the organization.

The presentations made at the annual meeting are usually given by members of the organization, management advocates, and union advocates. The topics covered in the presentations provide insight into the manner in which arbitrators conduct their business and how arbitration cases are decided.

Presentations reproduced in the book include a history of arbitration over the past forty years, the use of grievance arbitration for small claims, discussions of Management's and Labor's views of labor relations arbitration, arbitration of employee drug abuse cases, mediation in the coal industry, professional football arbitration, interest arbitration in state and local governments, transit, interest, and expedited arbitration.

—Lawrence Mann Jr.

*A Year of Excellence 1985: The Peters and Waterman MBWA Diaries* by Tom Peters and Bob Waterman (New York: Random House, Not Just Another Publishing Co., Inc., and Robert H. Waterman Jr., 1984); desk size, \$25.00; pocket, \$12.50; leather.

Two years after Tom Peters and Bob Waterman published their best-seller, *In Search of Excellence* the management consultants have drawn together tips and insights from top-performing firms into their new plan-

ning diaries—coordinated desk and pocket calendars designed to enable managers from all walks of life to capture the managerial magic that distinguishes excellent organizations.

Peters and Waterman claim they are convinced "*in every kind of organization, outstanding permanence is invariably achieved by those who provide total customer satisfaction through superior quality, service, and (much) better listening by those who build uncommon commitment by scraping away barnacles of bureaucracy and frequently celebrating creative contributions from everyone and by those who carve out of entrepreneurial environments—from account departments to product development teams—where innovative skunkworks and champions thrive.*"

Their technique, MBWA, was named by Hewlett-Packard Vice-president John Doyle—*Managing By Wandering Around*. "*It means,*" they say, "*staying in close, intense contact with associates and customers—really listening to the mavericks and the quiet ones whose good ideas lead to top-notch performance.*"

Each page of these handsome diaries offers MBWA reminders and special planning features for every manager's daily schedule. Peters' and Waterman's reasoning is simple: "*If attention to customer service and innovation is reflected in direct, practical ways on tomorrow's calendar, it's a strategic priority.*"

Both calendars include stories and insights from the most energetic American and European "*wanderers,*" as well as such special features as fifteen-month weekly planners, calendars through 1986, toll-free telephone directories, North American and international time zones, area codes, direct distance dialing codes; national holidays and notable dates for all English-speaking countries through 1986; metric conversion factors; and more.

The diaries are bound in bonded leather and feature flexible bindings, ribbon markers, and gilded edges. They truly represent *excellence*.

—Joe Wagner

### Government Publications

*An Assessment of U.S. Competitiveness in High Technology Industries*, International Trade Administration of the U.S. Dept. of Commerce (Washington, D.C.: U.S. Government Printing Office, 1983); 68 p. (C61.2:T22).

There has been a steady decline of this nation's position in the marketing of high technology industry products during the past decade. The dominant position once held by us has shifted to foreign competitors. American policy makers are concerned that the erosion of our position could spell economic and political disaster for the nation.

This report examines the role of high technology industries in the United States economy and assesses how the nation has responded to the competition from foreign industrial producers. The findings reached in this study are not surprising. Even the casual economy watcher could reach the same conclusions as the authors:

1. High technology industries are vital to the economic growth of the nation—the high technology industries make up the bulk of all technological industries;
2. Development of high technology is essential if America is to continue increasing its standard of living;
3. National security is dependent upon high technology for maintenance of modern weapons superiority;
4. The trend in the market is toward high technology industries, and the United States will have to compete more favorably in order to meet the foreign challenge; and
5. Japan poses the greatest challenge to America's high technology industries.

The findings of the report are developed in three sections which follow a brief introduction in Section I. Section II is a description of technology-intensive United States industries. Section III assesses the role of high technology industries in international trade and makes comparisons between foreign and domestic high technology industries. Section IV describes the major factors affecting technology including foreign government actions which impact on our high technology industries. The bulk of the report is devoted to appendices which offer supporting evidence for the findings in the form of tables and other graphic materials.

While the report does not present any new or startling information, it is a valuable resource for one seeking evidence to gain public support for strengthening high technology industries.

*Commercial Biotechnology: An International Analysis*, (Washington, DC: U.S. Congress, Office of Technology Assessment, OTA-BA-218, January 1984); 611 pp.; (Y3.T22/2:3C73/7).

The first cloning of a gene in 1973 was heralded as a remarkable scientific breakthrough, but few people realized at that time a new kind of industrial revolution was beginning. In the past decade, however, the world has witnessed major changes in the industrial uses of biotechnology.

*Biotechnology* refers to the use of living organisms in technological applications. Living organisms, of course, long have been used in traditional forms of biotechnology such as baking and wine-making. The *new biotechnology* embraces something radically different—the deliberate changing of the cell structure of living organisms for human purposes. More specifically, the new biotechnology involves the use of recombinant DNA, cell fusion, and bioprocess engineering in a variety

of applications such as food, energy, medicine, and waste disposal.

This United States Office of Technology Assessments publication provides a comprehensive treatment of the challenges and opportunities prompted by the biotechnological revolution. It is a cooperative effort by the Office's Commercial Biotechnological Project Staff. Clear writing, adept editing, and thorough indexing make this formidable and somewhat technical work good reading.

One of the many helpful items provided by this publication is a set of biotechnological definitions along with applications from a number of foreign countries. As the title suggests, the focus of the work is international and comparative; that is, the authors and editors have placed biotechnological research in the United States in its world context.

The study includes a scientific explanation of biotechnology, as well as an analyses of its economic, legal, and social aspects. It is intended to give researchers, law-makers, scientists, entrepreneurs, and others access to timely and relevant information concerning whatever facets of biotechnology might interest them. Persons in positions of authority faced with decisions concerning basic and applied research on living organisms and who wish to take advantage of the market potential of biotechnology will find the report particularly valuable.

More to the point, the report provides the information in such a way that the user may compare the United States' experiences and problems with those of researchers and decision-makers in other countries. Considerable attention is devoted to the problems involved in coordinating university, governmental, and industrial support for basic and applied research on biotechnological subjects.

The authors and editors of the report reflect a healthy and welcome

awareness of the ethical complexities involved in biotechnological undertakings, as well as the importance of public understanding of the implications and social costs of such undertakings. It is the work's thesis—if it may be said to have one—that the United States risks losing its position of preeminence in the field of biotechnology to Japan (and partly to West Germany) unless the United States directs more attention to promoting the commercialization of biotechnology.

*Charging for Federal Services*, Congressional Budget Office (Washington, D.C.: U.S. Government Printing Office, 1983); 105 p. (Y10.2:c37).

The concept of user financing for public services was developed by the Reagan administration as part of its drive to reduce government services and spending. The federal government over the years has subsidized a wide variety of interest groups by providing services either free of charge or at below cost.

These subsidies, some of which may have had sound justifications at one time or another, often mean inequitable windfalls for special interests and grossly inefficient utilization of resources. A move in the direction of *user fees* for government services was logical from the ideological perspective of the Reagan administration. User fees, in the administration's view, would mean less government activity and would place the provision of government services on a *businesslike* footing.

The *user fee* movement has resulted in several legislative measures, such as the *Airway Development Act of 1982* and the *Surface Transportation Assistance Act of 1982*. These measures purport to make the provision of federal services more efficient and equitable.

A rationale for the assessment of user fees opens the report. Subse-

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# Louisiana's Economic Predictions

A grant to Louisiana State University to construct a model for forecasting the state's revenues was awarded by the Legislative Fiscal Office in 1975. The history of serious econometric modelling of economic behavior in the state began with that project. The Board of Regents in 1981-82 awarded a grant to construct a more complete model of the Louisiana economy, bringing into the picture such items as employment, income, financial data, and energy activities. Thus was born the *Louisiana Econometric Model (LEM)*.

The Board of Regents sponsored a second grant in 1983-84 to allow the *LEM* to be greatly expanded in two areas. A \$5,000 contribution also was made last year by the Foundation for a Better Louisiana to aid in this expansion. Several companies, namely Gulf States Utilities, Chevron Oil, Louisiana Power and Light, New Orleans Public Service, and Southwestern Electric Power Company together have contributed \$17,000 to assist in maintaining the model in 1984-85.

The first area of the 1983-84 extension has made available projections for more detailed industrial categories. We, for example, were able to project only *Nondurable Goods* employment until this year. This year, estimates are presented for employment in such industries as petroleum refining and chemicals within the nondurable goods category.

*LEM's* second major extension was constructed on a geographic basis. We are making forecasts at the sub-state level for the first time, providing projections for seven of Louisiana's Metropolitan Statistical Areas. This extension will be partic-

ularly helpful to businesses and industries operating in these areas. The only *MSA* for which forecasts have not been made is Houma, the state's newest designated metropolitan area.

Presentation of the 1985 and 1986 forecasts from *LEM* will proceed in three steps. First, *LEM* is driven by forecasts of national economic activity provided by the national *Wharton Econometric Model*. We will begin by discussing the national forecasts that formed the basis for our Louisiana predictions. The second part of the report will detail the statewide projections, and the final section will cover projections for the *MSAs*.

## National Forecasts

Louisiana's economic projections depend upon one's expectations about the national economy in 1985 and 1986. *LEM* is driven by national forecasts from the *Wharton Econometric Model*. Wharton's projections for the selected items of importance to *LEM* are illustrated in *Table 1*.

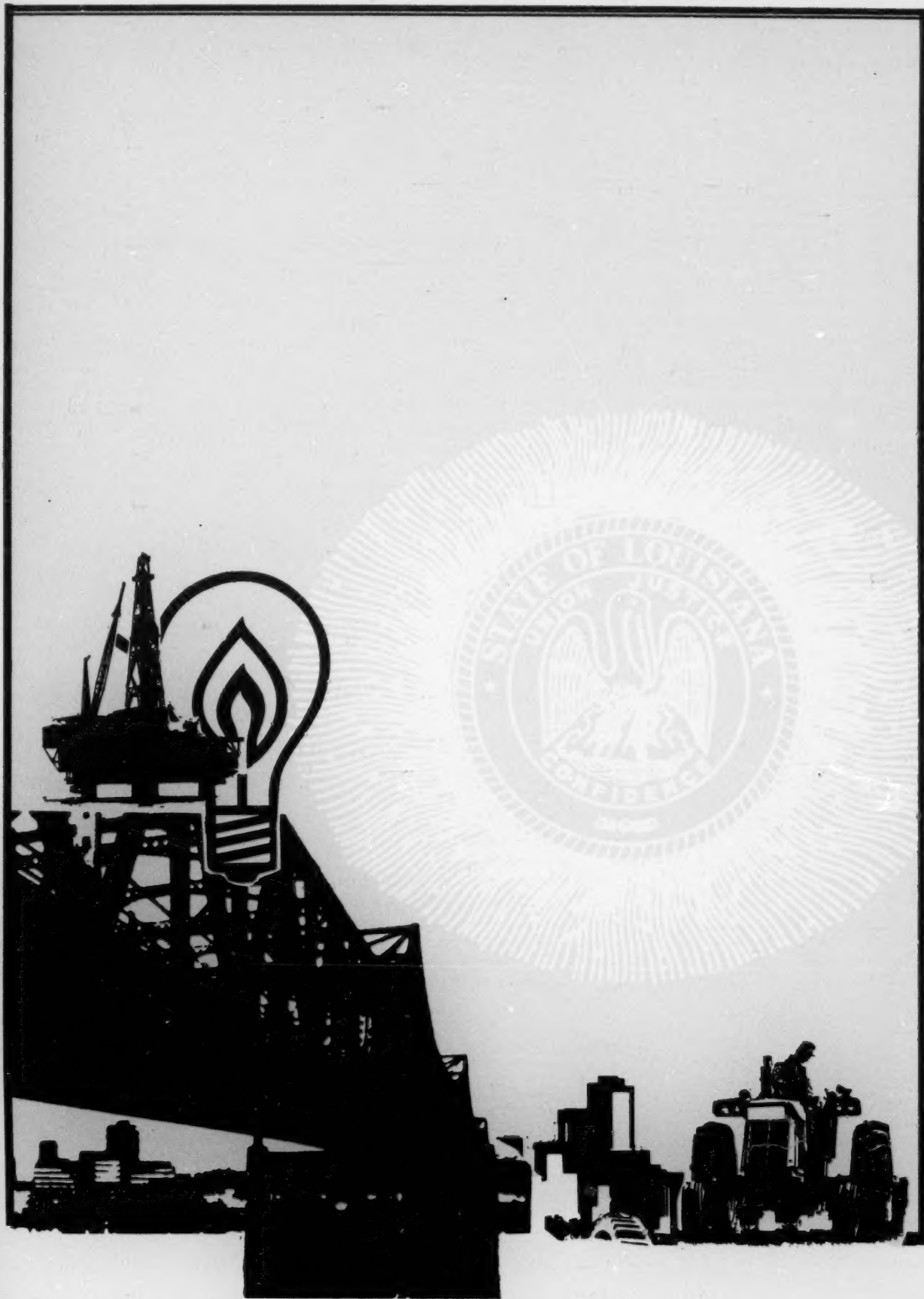
Several points are noteworthy in this table. First, the Wharton model is expecting the growth rate in the national economy—as given by real *GNP*—to drop off in 1985 but still to grow at a healthy 3.8-percent annual rate. This growth rate is expected to continue to slow to only a 1.2-percent rate in 1986—a rate so low as to cause some to label 1986 a *growth-recession* year.

Second, Wharton is projecting the inflation rate, as measured by the *GNP* deflator, will rise slightly over the next two years from its present rate of 3.7 percent to levels of 4.8 and 5.6 percent in 1985 and 1986, respectively. The forecast predicts prices will accelerate slightly but still remain well below the double digit rates of the late 1970s and early 1980s.

Wharton's interest rate forecasts for short term securities—three-month treasury bills, long-term securities, and triple-A utility bond rates—are also included in *Table 2*. Wharton is projecting a 311 basis point rise in short-term rates and a 135 basis point rise in long-term rates in 1985. These higher rates are attributed to Wharton's expectations for a high and growing federal deficit in that year. Both rates are expected to drop somewhat in 1986 but remain above present levels.

The Wharton forecast for *OPEC* oil prices is of particular importance to Louisiana. Its expectation is that *OPEC* prices will remain stable throughout the forecast period at \$29.17 per barrel. This stabilization in oil prices is very important to the Louisiana oil and gas industry which has suffered since 1981 from both a drop in oil prices and from an uneasy feeling that prices might continue to drop even further. Even as this forecast goes to press, *OPEC* oil ministers are meeting at Geneva, Switzerland to consider the cartel's response to small oil price cuts introduced by Nigeria and Great Britain. The *OPEC* oil ministers are vowing to restrict production enough to maintain the *OPEC* price at \$29 per barrel.

National economic activity obviously affects the Louisiana economy. Hence, the national forecasts become very important in predicting the state's economic activity. The Wharton forecasts are representative national forecasts. We believe the 1986 Wharton forecast for growth in real *GNP* may be slightly pessimistic and the interest rate projections appear to be fairly high. *LEM's* forecasts, based on the Wharton projections, in our judgment represent a conservative estimate of Louisiana's recovery, if the price of oil holds at \$29 to \$30. The recovery



# Executive Summary

Louisiana's economy has begun a recovery in 1984 that is expected to continue through 1985 and 1986. This projected growth is due to national economic growth and stabilization in the energy markets. Any major unexpected decline in oil prices will adversely affect Louisiana's recovery. Otherwise, economic conditions will improve, slowly but surely. The following report is based on the findings of LSU forecasters who utilized the national *Wharton Econometric Model* in addition to their own *Louisiana Econometric Model*.

The 1983 Louisiana economy responded to the full force of the national recession, uncertainties in the energy markets, and structural adjustments in the petrochemical industry with a 2.7-percent reduction in non-agricultural employment. A modest recovery has been taking place in 1984, and a slightly stronger recovery is projected for 1985 and 1986. The success of this recovery is predicated on continued growth in the national economy, stabilization of the energy markets, and the ability of the petrochemical industry to respond to market pressures. This recovery, while it cannot be called a boom, allows for growth in employment, personal income, and per capita income.

Wharton Econometric Model national and Louisiana forecasts are displayed in *Table 2*. the anticipated growth rate in the national economy suggests a substantial growth in 1984, followed by a fairly buoyant 1985 and a growth slowdown in 1986. A slight upward drift in inflation is expected throughout the forecast period, although OPEC oil prices are expected to remain stable

through 1986. Short-term interest rates are projected to peak in 1985 and then drop gradually through 1986.

The Louisiana Econometric Model (*LEM*) projections for both the state and seven of the Louisiana Metropolitan Statistical Areas (*MSAs*) are given in the lower panel of *Table 2*. The recession that hit the state in 1982 and 1983 resulted in a sizeable drop in employment. Especially hard hit was the oil and gas industry with the average number of active drilling rigs dropping by one-third. Oil and gas employment, while not shown in *Table 1*, dropped from a peak of 101,600 in 1981 to 75,500 in June 1984.

The stabilization of oil prices and the national economy's continued growth have influenced *LEM* in its projection that 1985 and 1986 will show continuation of the economic recovery that became evident in Louisiana during 1984. Total wage and salary employment is expected to grow to 1,636,500 workers by 1986 after having dropped to 1,555,900 in April 1983.

Per capita and personal income growth both are projected to recover from very weak performances in 1983 and to increase at modest rates—given expected inflation—through 1986. This personal income growth will provide the foundation for a modest rise in bank deposits in Louisiana during the forecast period.

Electricity and natural gas consumption were both down in 1983 due to poor income growth and higher utility prices. Electricity consumption is expected to remain flat throughout 1986 despite the growth in personal income in the state and because of several utility price shocks that are forecast to occur in early 1985.

Louisiana's oil and natural gas production will suffer in 1985 and 1986 from the effects of greatly reduced drilling activity. These projected production declines will complicate state fiscal conditions, since state severance tax collections will continue to be a drag on the budget.

The 1982-83 recession did not affect the state evenly. Lafayette was particularly hard hit, not so much by the national recession as by the \$5 to \$6 decline in oil prices. Lake Charles not only suffered from the oil price drop, but that city's chemical industry was affected adversely by price distortions created under the Natural Gas Policy Law of 1978.

Lafayette is projected to rebound fairly strongly from its 1982-84 decline, as the state begins to recover in 1985 and 1986. Lake Charles is also expected to grow, albeit at a more modest rate. Baton Rouge and Shreveport, with less of a direct dependence on the oil and gas industry than the previous two cities, will enjoy a steady recovery from the recession. Economic growth in Monroe and New Orleans generally will match the state average, while employment growth in Alexandria is expected to remain lethargic through 1985 and then pick up in 1986.

will be adversely affected should the price not hold at \$29 to \$30 per barrel.

## STATEWIDE PROJECTIONS

### Employment Forecasts

Detailed projections for a wide range of economic variables in Louisiana are contained in *Tables 3-9*. *Table 3* contains the newly expanded non-agricultural wage and salary employment forecasts for 1985 and 1986. The news is neither good nor bad but rather better.

Louisiana's economy suffered through a difficult recessionary period which began in early 1982 and continued well into 1983. This recession was brought on by a combination of two factors: the spillover effect of the national recession and a general uncertainty in the energy markets brought on by a significant drop in oil prices. Wage and salary employment fell by 1.4 percent from 1981 to 1982 and then—as the last row of *Table 3* reveals—employment dropped by an even greater rate of 2.7 percent from 1982 to 1983.

Some of the basic state industries were particularly hard hit during this period. Employment in the oil and gas extraction industry, for example, peaked at 101,600 in December 1981. Employment in this industry declined continuously to 75,500 in June 1984. The industry's rate of decline in employment has tapered off noticeably in the past year, however, as oil prices have stabilized and the fear of a further price decreases has eased off (at least through October 1984).

Since the Wharton Model is predicting a continuation in oil price stability, *LEM* is projecting employment in oil and gas extraction will begin rising again, though very slowly. There is some evidence that the market supports this prediction.

Offshore tract offerings in both 1983 and 1984 led to record lease purchases by oil companies. Also, the average number of running rigs operating in the South Louisiana area in the first seven months of 1984 was 15.3 percent higher than for the same period in 1983.

A similar pattern of employment behavior is occurring in the chemical industry. Wage and salary employment in Chemicals and Allied Products peaked in December 1981 at 34,900. It then fell continuously to the 29,100 level in June 1984, as is shown in *Table 3*.

**TABLE 1**  
Wharton National Forecasts and the Louisiana  
Economic Forecasts for Selected Economic Indicators

| Economic Indicators                             | Year      |           |           |           |
|-------------------------------------------------|-----------|-----------|-----------|-----------|
|                                                 | 1983      | 1984      | 1985      | 1986      |
| <b>Wharton National Projections<sup>1</sup></b> |           |           |           |           |
| Real GNP Growth Rate                            | 3.7       | 7.5       | 3.8       | 1.2       |
| Rate of Inflation                               | 3.8       | 3.7       | 4.8       | 5.6       |
| OPEC Oil Price                                  | \$ 29.86  | \$ 29.17  | \$ 29.17  | \$ 29.14  |
| 3-Month T-Bill Rate                             | 8.61      | 10.14     | 13.25     | 12.24     |
| <b>Louisiana Forecasts<sup>2</sup></b>          |           |           |           |           |
| Wage and Salary                                 |           |           |           |           |
| Employment Level (000s)                         | 1,564.1   | 1,569.0   | 1,608.3   | 1,636.5   |
| Growth Rate                                     | -2.7      | 0.3       | 2.5       | 1.8       |
| Per Capita Income                               |           |           |           |           |
| Level                                           | \$ 10,270 | \$ 10,687 | \$ 11,405 | \$ 12,109 |
| Growth Rate                                     | 2.0       | 4.1       | 6.7       | 6.2       |
| Growth Rates of:                                |           |           |           |           |
| Total Personal Income                           | 0.4       | 4.8       | 7.6       | 7.5       |
| Bank Deposits                                   | 10.2      | 3.3       | 4.5       | 5.5       |
| Electricity Consumption                         | -1.7      | 0.1       | 0.0       | 1.9       |
| Natural Gas Consumption                         | -13.1     | 4.7       | 1.5       | 3.9       |
| Active Drilling Rigs                            | -33.8     | 16.1      | 2.3       | 3.8       |
| Oil Production                                  | -5.0      | 3.6       | -7.1      | -9.2      |
| Natural Gas Production                          | -11.6     | -3.1      | -7.4      | -6.0      |
| <b>Growth Rates in Wage and Salary</b>          |           |           |           |           |
| Employment in:                                  |           |           |           |           |
| Alexandria                                      | 0.19      | 0.56      | 0.65      | 1.47      |
| Baton Rouge                                     | -0.15     | 1.80      | 1.84      | 2.39      |
| Lafayette                                       | -8.32     | 0.23      | 4.30      | 3.90      |
| Lake Charles                                    | -3.59     | -4.70     | 2.69      | 1.64      |
| Monroe                                          | -0        | -1.17     | 3.43      | 1.89      |
| New Orleans                                     | -2.10     | 0.78      | 2.12      | 1.20      |
| Shreveport                                      | -1.93     | 1.70      | 3.71      | 2.93      |

1) Wharton Econometric Model  
2) Louisiana Econometric Model

**TABLE 2**  
Wharton's Projections for Selected Indicators  
for the U.S. Economy: 1983-85

| Indicator                   | 1984    | 1985    | 1986    |
|-----------------------------|---------|---------|---------|
| Real GNP (Growth Rate)      | 7.5%    | 3.8%    | 1.2%    |
| GNP Deflator (Growth Rate)  | 3.7%    | 4.8%    | 5.6%    |
| 3-Month Treasury Bill Rate  | 10.14%  | 13.25%  | 12.24%  |
| Moody AAA Utility Bond Rate | 13.05%  | 14.40%  | 13.35%  |
| OPEC Oil Price (Per Barrel) | \$29.17 | \$29.17 | \$29.17 |

Wharton Quarterly Model Outlook, September, 1984.

**TABLE 3**  
**Louisiana Nonagricultural Wage & Salary Employment by Industrial Sector**  
(000's)

| Sector                                | Actual         |                | Projected      |                | Average Annual Growth Rate |             |            |            |            |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------------------|-------------|------------|------------|------------|
|                                       | 1982(a)        | 1983(a)        | 1984(b)        | 1985           | 1986                       | 82-83       | 83-84      | 84-85      | 85-86      |
| Mining                                | 95.9           | 80.5           | 78.3           | 80.8           | 82.2                       | -15.8       | -2.7       | 3.2        | 1.7        |
| Oil & Gas Extraction                  | 92.3           | 77.3           | 75.1           | 77.0           | 78.3                       | -16.3       | -2.8       | 2.5        | 1.7        |
| Nonmetallic Materials                 | 3.6            | 3.2            | 3.1            | 3.8            | 3.9                        | -11.1       | -3.2       | 22.6       | 2.6        |
| Construction                          | 123.0          | 114.3          | 113.3          | 116.2          | 118.3                      | -7.0        | -0.9       | 2.6        | 2.1        |
| Manufacturing                         | 202.6          | 179.8          | 179.1          | 188.7          | 191.4                      | -11.3       | -0.4       | 5.4        | 1.4        |
| Durable Goods                         | 96.0           | 79.6           | 81.2           | 88.4           | 90.1                       | -17.0       | 2.0        | 8.9        | 1.9        |
| Lumber & Wood                         | 12.3           | 13.0           | 13.4           | 13.6           | 13.7                       | 5.7         | 3.1        | 1.5        | 0.7        |
| Furniture & Fixtures                  | 0.7            | 0.8            | 0.7            | 0.8            | 0.8                        | 14.3        | -12.5      | 14.3       | 0.0        |
| Stone, Clay, & Glass                  | 7.5            | 7.5            | 7.6            | 8.1            | 8.3                        | 0.0         | 1.3        | 6.6        | 2.5        |
| Primary Metals                        | 5.8            | 3.6            | 3.5            | 3.7            | 3.7                        | -37.9       | -2.8       | 5.7        | 0.0        |
| Fabricated Metals                     | 17.3           | 13.6           | 13.3           | 13.9           | 14.1                       | -21.4       | -2.2       | 4.5        | 1.4        |
| Machinery, ex. Electrical             | 13.8           | 9.8            | 9.8            | 10.4           | 10.7                       | -29.0       | 0.0        | 3.1        | 2.9        |
| Electric & Electronic Machinery       | 10.1           | 8.2            | 9.9            | 11.3           | 11.4                       | -18.8       | 20.7       | 14.1       | 0.9        |
| Transportation Equipment              | 26.2           | 21.1           | 20.7           | 24.1           | 24.9                       | -19.5       | -1.9       | 16.4       | 3.3        |
| Other Durable Goods                   | 2.3            | 2.1            | 2.4            | 2.5            | 2.5                        | -8.7        | 14.3       | 4.2        | 0.0        |
| Nondurable Goods                      | 106.6          | 100.2          | 97.9           | 100.3          | 101.3                      | -6.0        | -2.3       | 2.5        | 1.0        |
| Food & Kindred Products               | 24.7           | 23.6           | 22.1           | 22.1           | 22.1                       | -4.5        | -6.4       | 0.0        | 0.0        |
| Apparel & Textiles                    | 8.8            | 8.2            | 9.1            | 9.6            | 9.9                        | -6.8        | 11.0       | 5.5        | 3.1        |
| Paper & Allied Products               | 12.1           | 11.6           | 11.7           | 11.9           | 12.1                       | -4.1        | 0.9        | 1.7        | 1.7        |
| Printing & Publishing                 | 9.7            | 9.7            | 9.8            | 10.0           | 10.1                       | 0.0         | 1.0        | 2.0        | 1.0        |
| Chemical & Allied Products            | 33.6           | 30.3           | 29.1           | 29.9           | 30.3                       | -9.8        | -4.0       | 2.7        | 1.3        |
| Petroleum & Coal Products             | 13.6           | 12.9           | 12.4           | 12.9           | 12.9                       | -5.1        | -3.9       | 4.0        | 0.0        |
| Petroleum Refining                    | 12.8           | 12.2           | 11.7           | 12.2           | 12.2                       | -4.7        | -4.1       | 4.3        | 0.0        |
| Other Nondurables                     | 4.2            | 3.8            | 3.9            | 3.9            | 3.9                        | -9.5        | 2.6        | 0.0        | 0.0        |
| Transportation & Public Utilities     | 108.5          | 117.9          | 115.0          | 118.1          | 118.5                      | -8.2        | -2.5       | 2.7        | 0.3        |
| Railroad Transportation               | 8.5            | 7.0            | 7.3            | 7.9            | 7.9                        | -17.6       | 4.3        | 8.2        | 0.0        |
| Transportation, ex. Railroads         | 77.2           | 68.9           | 67.1           | 68.1           | 67.9                       | -10.8       | -2.6       | 1.5        | -0.3       |
| Communications & Public Utilities     | 42.8           | 41.9           | 40.6           | 42.1           | 42.7                       | -2.1        | -3.1       | 3.7        | 1.4        |
| Wholesale & Retail Trade              | 367.7          | 368.1          | 372.9          | 385.0          | 390.4                      | 0.1         | 1.3        | 3.2        | 1.4        |
| Wholesale Trade                       | 100.3          | 94.8           | 95.2           | 98.2           | 99.1                       | -5.5        | 0.4        | 3.2        | 0.9        |
| Retail Trade                          | 267.3          | 273.3          | 277.8          | 286.8          | 291.3                      | 2.2         | 1.6        | 3.2        | 1.6        |
| Gen. Merchandise, Apparel, Appliances | 59.7           | 58.4           | 57.2           | 57.9           | 58.3                       | -2.2        | -2.1       | 1.2        | 0.7        |
| Food Stores                           | 49.4           | 50.6           | 51.3           | 53.4           | 54.8                       | 2.4         | 1.4        | 4.1        | 2.6        |
| Auto Dealers & Service Stations       | 30.4           | 30.4           | 30.8           | 31.1           | 30.7                       | 0.0         | 1.3        | 1.0        | -1.3       |
| Eating & Drinking Places              | 77.6           | 82.5           | 86.6           | 91.5           | 93.9                       | 6.3         | 5.0        | 8.7        | 2.6        |
| Other Retail Trade                    | 50.2           | 51.4           | 51.9           | 52.9           | 53.6                       | 2.4         | 1.0        | 1.9        | 1.3        |
| Finance, Insurance, Real Estate       | 79.9           | 82.6           | 83.7           | 85.2           | 85.7                       | 3.4         | 1.3        | 1.8        | 0.6        |
| Banking                               | 26.5           | 27.6           | 27.9           | 29.2           | 30.2                       | 4.2         | 1.1        | 4.7        | 3.4        |
| Services                              | 302.1          | 304.5          | 310.2          | 319.9          | 327.8                      | 0.8         | 1.9        | 3.1        | 2.6        |
| Hotels & Other Lodging Places         | 20.9           | 21.3           | 22.4           | 23.4           | 24.1                       | 1.9         | 5.2        | 4.5        | 3.0        |
| Other Services                        | 281.2          | 283.2          | 287.8          | 296.5          | 303.7                      | 0.7         | 1.6        | 3.0        | 2.4        |
| Government                            | 307.3          | 316.6          | 316.5          | 317.5          | 321.9                      | 3.0         | 0.0        | 0.3        | 1.4        |
| Federal                               | 33.7           | 34.0           | 34.4           | 35.0           | 35.2                       | 0.9         | 1.2        | 1.7        | 0.6        |
| State & Local                         | 273.5          | 282.5          | 282.1          | 282.5          | 286.7                      | 3.3         | -0.1       | 0.1        | 1.5        |
| State                                 | 100.8          | 101.1          | 99.5           | 96.3           | 97.1                       | 0.3         | -1.6       | -3.2       | 0.8        |
| Local                                 | 172.7          | 181.5          | 183.4          | 186.2          | 189.6                      | 5.1         | 1.0        | 1.5        | 1.8        |
| <b>TOTAL</b>                          | <b>1,607.0</b> | <b>1,564.1</b> | <b>1,569.0</b> | <b>1,608.3</b> | <b>1,636.5</b>             | <b>-2.7</b> | <b>0.3</b> | <b>2.5</b> | <b>1.8</b> |

a. Louisiana Department of Employment Security, mimeograph. Data are annual averages received as of February, 1984.  
b. Labor Market Information, Louisiana Department of Employment Security, 1984. Average of first eight months.

The chemical industry was initially affected by price distortions its natural gas feedstocks caused by the Natural Gas Policy Act (NGPA). Adjustments to these raw material price shocks have led to the closing of a number of chemical facilities. Industry specialists indicate these adjustments generally have been completed, and the price distortions caused by the NGPA have been reduced somewhat by the readjustment of natural gas prices. Consequently, LEM is projecting a slight recovery in this industry, with employment rising to a level of 30,300 in 1986.

Recovery in the oil and gas industry and a general recovery in the Louisiana and national economies is expected to turn around another important industry in the state—transportation equipment manufacturing. Employment in this industry also peaked in December 1981 (at 31,600 workers) when barge and shipbuilding activities were quite strong. Lower oil prices and reduced offshore drilling significantly lessened the demand for new barges. These conditions caused employment in the industry to fall by approximately one-third to 20,700. LEM projections call for a gradual recovery in this important industry to 24,900 workers in 1986.

LEM's projection of a slow recovery in the three major industries discussed above, in addition to the general overall recovery in durable and nondurable manufacturing over the next two years, will lead to a moderate rebound in contract construction according to Table 3. Employment in this vital sector peaked at 144,100 in the summer of 1981, bottomed out in 1983 at around 114,000 workers, and thereafter has remained essentially level. LEM forecasts call for a mild turn-around to the 118,600 level in 1986.

The mild resurgence in these basic industries naturally will lead to

growth in the feeder industries such as services, retail trade, and banking. Growth in these industries cushioned the impact of the 1981-83 recession on the state's economy, and their expected employment growth over the next two years will contribute heavily to overall employment in Louisiana. Almost one-half of the employment growth projected between 1984 and 1985, for example, can be accounted for by growth in the retail trade and services industries.

## INCOME PROJECTIONS

### Industry Projections

Table 4 contains historical data and projections for nonagricultural wage, salary, and proprietor's income by industry in Louisiana. Generally speaking, LEM projects income growth in an industry by using the employment growth numbers in Table 3 and estimates of price level changes over the forecast period.

The impact of the past recession on income is obvious from examining the growth rate figure for 1982-83 at the bottom of the table—0.4 percent. Note, however, that a combination of employment growth in the state plus Wharton's forecast of rising inflation rates leads to income growth rates of 7.6 and 7.5 percent in 1985 and 1986, respectively.

The Louisiana sector providing the greatest amount of wage, salary, and proprietor's income remains the service industry which includes occupations such as food workers, health service workers, attorneys, and hairdressers. Income growth in excess of 9 percent is projected for this sector through 1985 and 1986.

A nice recovery is projected for income in the durable goods industries. These industries, along with construction, are especially suscep-

tible to recessionary influences. The other side of that coin is that they typically tend to recover quickly once an upswing begins. The strong growth rate figures in the last two columns of Table 4 support this contention. Note especially the hefty rebound projected for income in the Transportation Equipment sector of durable goods manufacturing. The pronounced gains in this sector are associated with the strong recovery in employment in this sector that was revealed in earlier in Table 3.

### Income by Major Source

Table 5 contains the LEM forecasts for personal income in Louisiana by major source. The top row in this table—Wage and Salary Income—is not quite the same as the totals at the bottom of Table 4 because of the addition of farm industry wages. The growth rate numbers generally reflect an economy that is moving from a recessionary mode in the 1982-83 period into a mild expansion phase throughout the forecast period.

A rebounding economy brings on a natural growth in dividend income as corporate profits rise. The preceding factor, coupled with the Wharton forecast of higher interest rates, will cause the Dividends, Rent, and Interest component of personal income to enjoy an especially positive growth through 1986 (our own feeling that Wharton's interest rate projections are too high would negatively affect this source of income).

Transfer Payments—such as unemployment insurance and welfare payments—were growing rapidly (12.5 percent) in the recessionary year of 1982-83. However, as the economy bottoms out and begins to grow, the growth rate in this component falls markedly.

The estimate for personal income



**TABLE 4**  
**Louisiana Non-Agricultural Wage & Salary and Proprietor's Income**  
(Thousands of Dollars)

| Sector                                | Actual            |                   | Projected         |                   |                   | Average Annual Growth Rate |            |            |            |
|---------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------------|------------|------------|------------|
|                                       | 1982(a)           | 1983(a)           | 1984              | 1985              | 1986              | 82-83                      | 83-84      | 84-85      | 85-86      |
| Mining                                | 3,094,265         | 2,663,314         | 2,679,601         | 2,841,287         | 3,068,753         | -13.9                      | 0.6        | 6.0        | 8.0        |
| Oil & Gas Extraction                  | 3,002,051         | 2,579,882         | 2,601,022         | 2,749,663         | 2,962,481         | -14.1                      | 0.8        | 5.7        | 7.7        |
| Nonmetallic Materials                 | 92,214            | 83,432            | 79,579            | 91,624            | 106,272           | -9.2                       | -5.8       | 16.6       | 16.0       |
| Construction                          | 2,997,940         | 2,925,098         | 2,918,683         | 3,131,179         | 3,362,076         | -2.4                       | -0.2       | 7.3        | 7.4        |
| Manufacturing                         | 5,340,887         | 4,990,100         | 5,192,248         | 5,697,450         | 6,128,638         |                            |            |            |            |
| Durable Goods                         | 2,361,386         | 1,996,971         | 2,104,621         | 2,378,799         | 2,597,084         | -15.4                      | 5.4        | 13.0       | 9.2        |
| Lumber & Wood                         | 222,156           | 238,860           | 254,927           | 275,969           | 298,330           | 7.5                        | 6.7        | 8.3        | 8.3        |
| Primary Metals                        | 176,420           | 119,379           | 109,614           | 117,914           | 126,231           | -32.3                      | -8.2       | 7.6        | 7.1        |
| Fabricated Metals                     | 433,804           | 342,286           | 357,593           | 395,376           | 434,513           | -21.1                      | 4.5        | 10.6       | 9.9        |
| Machinery, ex. Electrical             | 364,063           | 264,387           | 258,211           | 272,988           | 295,746           | -27.4                      | -2.3       | 5.7        | 8.3        |
| Electric & Electronic Machinery       | 236,587           | 207,299           | 259,466           | 294,027           | 318,612           | -12.4                      | 25.2       | 13.3       | 8.4        |
| Transportation Equipment              | 715,364           | 598,284           | 628,280           | 772,641           | 861,184           | -16.4                      | 5.0        | 23.0       | 11.5       |
| Other Durable Goods (1)               | 212,992           | 226,476           | 236,530           | 249,884           | 261,868           | 6.3                        | 4.4        | 5.6        | 4.8        |
| Nondurable Goods                      | 2,979,501         | 2,993,129         | 3,087,627         | 3,318,651         | 3,584,140         | 0.5                        | 3.2        | 7.5        | 8.0        |
| Food & Kindred Products               | 470,046           | 476,392           | 477,599           | 499,414           | 531,105           | 1.4                        | 0.3        | 4.6        | 6.3        |
| Paper & Allied Products               | 354,670           | 378,172           | 402,940           | 433,580           | 471,941           | 6.6                        | 6.5        | 7.6        | 8.8        |
| Printing & Publishing                 | 166,772           | 181,166           | 195,961           | 211,099           | 226,750           | 8.6                        | 8.2        | 7.7        | 7.4        |
| Chemical & Allied Products            | 1,220,815         | 1,155,329         | 1,175,058         | 1,279,995         | 1,400,337         | -5.4                       | 1.7        | 8.9        | 9.4        |
| Petroleum & Coal Products             | 607,808           | 637,969           | 655,161           | 694,010           | 736,930           | 5.0                        | 2.7        | 5.9        | 6.2        |
| Other Nondurables (2)                 | 159,390           | 164,101           | 180,908           | 200,553           | 217,076           | 3.0                        | 10.2       | 10.9       | 8.2        |
| Transportation & Public Utilities     | 3,344,455         | 3,245,208         | 3,392,790         | 3,639,567         | 3,791,782         | -3.0                       | 4.5        | 7.3        | 4.2        |
| Railroad Transportation               | 263,191           | 229,086           | 252,930           | 281,399           | 300,452           | -13.0                      | 10.4       | 11.3       | 6.8        |
| Transportation, ex. Railroads         | 1,842,487         | 1,682,987         | 1,724,587         | 1,845,157         | 1,868,951         | -8.7                       | 2.5        | 7.0        | 1.3        |
| Communications & Public Utilities     | 1,238,777         | 1,333,135         | 1,415,273         | 1,513,011         | 1,622,379         | 7.6                        | 6.2        | 6.9        | 7.2        |
| Wholesale & Retail Trade              | 5,332,755         | 5,409,182         | 5,683,683         | 6,142,190         | 6,555,578         | 1.4                        | 5.1        | 8.1        | 6.7        |
| Wholesale Trade                       | 2,240,097         | 2,130,312         | 2,226,164         | 2,437,198         | 2,610,027         | -4.9                       | 4.5        | 9.5        | 7.1        |
| Retail Trade                          | 3,092,658         | 3,278,864         | 3,457,519         | 3,704,992         | 3,945,551         | 6.0                        | 5.4        | 7.2        | 6.5        |
| Gen. Merchandise, Apparel, Appliances | 593,403           | 608,505           | 624,095           | 661,079           | 698,612           | 2.5                        | 2.6        | 5.9        | 5.7        |
| Food Stores                           | 596,022           | 635,222           | 674,685           | 723,066           | 778,144           | 6.6                        | 6.2        | 7.2        | 7.6        |
| Auto Dealers & Service Stations       | 518,852           | 539,723           | 574,546           | 609,332           | 633,694           | 4.0                        | 6.5        | 6.1        | 4.0        |
| Eating & Drinking Places              | 655,248           | 699,979           | 764,059           | 839,750           | 907,147           | 6.8                        | 9.2        | 9.9        | 8.0        |
| Other Retail Trade                    | 729,133           | 795,435           | 820,134           | 871,765           | 927,954           | 9.1                        | 3.1        | 6.3        | 6.4        |
| Finance, Insurance, Real Estate       | 1,524,868         | 1,653,074         | 1,758,538         | 1,898,505         | 2,052,124         | 8.4                        | 6.4        | 8.0        | 8.1        |
| Banking                               | 480,951           | 535,152           | 582,941           | 638,626           | 702,766           | 11.3                       | 8.9        | 9.6        | 10.0       |
| Services                              | 5,530,954         | 6,139,454         | 6,750,110         | 7,396,177         | 8,062,997         | 11.0                       | 9.9        | 9.4        | 9.2        |
| Hotels & Other Lodging Places         | 223,333           | 234,658           | 257,025           | 279,359           | 302,966           | 5.1                        | 9.5        | 8.7        | 8.5        |
| Other Services                        | 5,307,621         | 5,904,796         | 6,493,085         | 7,106,818         | 7,760,031         | 11.3                       | 10.0       | 9.5        | 9.2        |
| Government                            | 5,350,967         | 5,612,595         | 5,836,498         | 6,061,130         | 6,465,577         | 4.9                        | 4.0        | 3.8        | 6.7        |
| Federal                               | 1,301,674         | 1,401,356         | 1,481,042         | 1,565,537         | 1,655,505         | 7.7                        | 5.7        | 5.7        | 5.7        |
| State & Local                         | 4,049,293         | 4,211,239         | 4,355,456         | 4,495,593         | 4,810,072         | 4.0                        | 3.4        | 3.2        | 7.0        |
| <b>TOTAL</b>                          | <b>32,517,091</b> | <b>32,638,025</b> | <b>34,212,151</b> | <b>36,797,485</b> | <b>39,540,111</b> | <b>0.4</b>                 | <b>4.8</b> | <b>7.6</b> | <b>7.5</b> |

a. Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce.

1. Includes furniture and fixtures, and stone and clay products.

2. Includes apparel and textile

**TABLE 5**  
**Louisiana Personal Income by Major Source**  
(Millions of Dollars)

| Sector                              | Actual(a)  |            | Projected  |            |            | Average Annual Growth Rates |       |       |       |
|-------------------------------------|------------|------------|------------|------------|------------|-----------------------------|-------|-------|-------|
|                                     | 1982       | 1983       | 1984       | 1985       | 1986       | 82-83                       | 83-84 | 84-85 | 85-86 |
| Wage & Salary Income(b)             | 33,016,363 | 33,214,380 | 34,828,315 | 37,474,247 | 40,188,840 | 0.6                         | 4.9   | 7.6   | 7.2   |
| Dividends, Rent, Interest           | 7,701,883  | 7,735,680  | 8,540,077  | 9,525,117  | 10,392,740 | 0.4                         | 10.4  | 11.5  | 9.1   |
| Transfer Payments                   | 5,778,953  | 6,499,379  | 6,773,001  | 7,206,658  | 7,723,143  | 12.5                        | 4.2   | 6.4   | 7.2   |
| Less Social Insurance Contributions | 1,857,582  | 1,898,145  | 2,096,398  | 2,339,764  | 2,525,942  | 2.2                         | 10.4  | 11.6  | 8.0   |
| Personal Income(c)                  | 44,633,007 | 45,575,826 | 48,069,995 | 51,881,258 | 55,798,781 | 2.1                         | 5.5   | 7.9   | 7.6   |
| Real Personal Income (1972 Dollars) | 21,367,774 | 21,168,521 | 21,527,091 | 22,171,478 | 22,581,459 | -0.9                        | 1.7   | 3.0   | 1.8   |

\*Regional Economic Information Service, Bureau of Economic Analysis, U.S. Department of Commerce.

<sup>b</sup>Includes farm industry wages.

<sup>c</sup>Components do not add to personal income because of the residence adjustment factor.

**TABLE 6**  
**Louisiana Population and Income Per Capita**

| Sector                                | Actual  |         | Projected |        |        | Average Annual Growth Rates |       |       |       |
|---------------------------------------|---------|---------|-----------|--------|--------|-----------------------------|-------|-------|-------|
|                                       | 1982(a) | 1983(a) | 1984      | 1985   | 1986   | 82-83                       | 83-84 | 84-85 | 85-86 |
| Population (Thousands)                | 4,383   | 4,438   | 4,498     | 4,549  | 4,608  | 1.3                         | 1.4   | 1.1   | 1.6   |
| Per Capita Income                     | 10,065  | 10,270  | 10,687    | 11,405 | 12,109 | 2.0                         | 4.1   | 6.7   | 6.2   |
| Real Per Capita Income (1972 Dollars) | 4,875   | 4,770   | 4,786     | 4,870  | 4,900  | -2.2                        | 0.3   | 1.8   | 0.6   |

\*Regional Economic Information Service, Bureau of Economic Analysis, U.S. Department of Commerce.

**TABLE 7**  
**Louisiana Financial Data**  
(Millions of Dollars)

| Sector                          | Actual |        | Projected |        |        | Average Annual Growth Rates |       |       |       |
|---------------------------------|--------|--------|-----------|--------|--------|-----------------------------|-------|-------|-------|
|                                 | 1982   | 1983   | 1984      | 1985   | 1986   | 82-83                       | 83-84 | 84-85 | 85-86 |
| <b>Commercial Banks</b>         |        |        |           |        |        |                             |       |       |       |
| Total Deposits                  | 25,872 | 27,816 | 28,746    | 30,049 | 31,710 | 10.2                        | 3.3   | 4.5   | 5.5   |
| Total Assets                    | 30,894 | 32,960 | 34,254    | 36,437 | 37,996 | 6.7                         | 3.9   | 6.4   | 4.3   |
| Total Loans                     | 15,950 | 17,238 | 17,799    | 18,743 | 19,398 | 8.1                         | 3.3   | 5.3   | 3.5   |
| Securities                      | 8,635  | 9,501  | 9,547     | 9,881  | 10,214 | 10.0                        | 0.5   | 3.5   | 3.4   |
| <b>Savings &amp; Loan Assn.</b> |        |        |           |        |        |                             |       |       |       |
| Savings                         | 8,670  | 10,696 | 10,976    | 11,336 | 12,085 | 23.4                        | 2.6   | 3.3   | 6.6   |
| Total Assets                    | 10,024 | 12,052 | 12,346    | 12,767 | 13,636 | 20.2                        | 2.4   | 3.4   | 6.8   |

and real personal income shown in the last two rows of *Table 5* are especially crucial to the overall model. *LEM* projections of financial activity, energy consumption changes, and activity in the seven *MSAs* in the state depend heavily on the forecast of personal income movements. *LEM* is projecting a growth in personal income consistent with the recovery phase of a business cycle. Personal income, which grew by only 2.1 percent in 1982-83, is expected to grow by 7.9 and 7.6 percent, respectively, in 1985 and 1986. Real personal income, i.e. personal income after adjusting for inflation, fell by 0.9 percent between 1982 and 1983. This variable, after enjoying a mild expansion in 1984, should expand at about a rate of 3 percent in

1985. A slightly slower growth in nominal income in 1986, coupled with Wharton's almost 1-percent-age-point rise in inflation, will cut the growth in real personal income almost in half to a 1.8-percent growth rate.

### Population and Per Capita Income

Population and per capita income data for the state are given in *Table 6*. Louisiana's 1983 population was estimated at 4,438,000, making it the nineteenth most populous state in the nation.

The state's population grew much faster than the nation's in the 1970s (15.4 percent in Louisiana, as opposed to only 11.1 percent for the

U.S.) because our thriving economy brought many families here to find work. A slowdown in population growth through 1986 is projected by *LEM* as a result of the combination of a substantial recession since 1981 and a mild projected recovery for the immediate future.

Nominal per capita income in the state was estimated by the U.S. Bureau of Economic Analysis to be \$10,270 in 1983, ranking Louisiana thirty-fifth in this category among the states. Per capita income is projected to expand to \$12,109 in 1986. Real per capita income, which fell in 1983, is projected to be almost flat in 1984, to expand by almost 2 percent in 1985, and then to grow by less than 1.0 percent in 1986.

## Financial Activity

Accurate forecasts of personal income behavior—as discussed above—are critical since this behavior is very important in projecting bank and thrift activities. The level of deposits—both demand and time—in banks and thrift institutions depends primarily upon how much money people are earning and on interest rates.

One is struck by an apparent anomaly, as one examines the historical and projected growth rate numbers in Table 7: the 1982-83 period was a recessionary one, yet deposits in both types of institutions grew very rapidly. Bank deposits

were up 10.2 percent while savings and loan deposits were up 23.4 percent.

The primary causes of this large growth were deregulatory activities within these financial institutions. During this period banks were allowed to begin paying interest on demand deposits, while interest rate caps on time deposits were removed. Substantial funds therefore flowed out of mutual funds and similar instruments into banks and thrifts.

These fund shifts mostly have been completed, and asset and deposit growth in these institutions will be growing in line with the economic behavior projected earlier for state

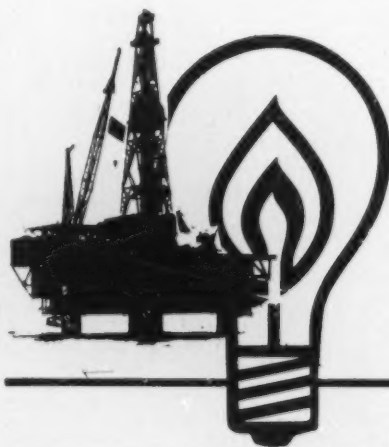


**TABLE 8**  
Expected Growth Rates in Utility Prices

| Period      | 82-83 | 83-84 | 84-85 | 85-86 |
|-------------|-------|-------|-------|-------|
| Price       |       |       |       |       |
| Electricity | 5.5%  | 5.7%  | 10.0% | 4.8%  |
| Natural Gas | 16.7% | 0.4%  | 3.8%  | 3.6%  |

**TABLE 9**  
Louisiana Energy Consumption and Production

| Sector                         | Actual    |            | Projected |         |           | Average Annual Growth Rates |       |       |       |
|--------------------------------|-----------|------------|-----------|---------|-----------|-----------------------------|-------|-------|-------|
|                                | 1982      | 1983       | 1984      | 1985    | 1986      | 82-83                       | 83-84 | 84-85 | 85-86 |
| <b>Energy Consumption:(a)</b>  |           |            |           |         |           |                             |       |       |       |
| Electricity(a)                 |           |            |           |         |           |                             |       |       |       |
| Residential                    | 18,166    | 18,097     | 18,275    | 18,363  | 18,706    | -0.4                        | 1.0   | 0.5   | 1.9   |
| Commercial & Industrial        | 35,967    | 35,146     | 35,485    | 35,611  | 36,307    | -2.3                        | 1.0   | 0.4   | 2.0   |
| Natural Gas(b)                 |           |            |           |         |           |                             |       |       |       |
| Residential                    | 68,495    | 64,896(c)  | 67,618    | 69,807  | 72,707    | -5.3                        | 4.2   | 3.2   | 4.2   |
| Commercial                     | 33,729    | 32,386(c)  | 32,435    | 32,336  | 31,974    | -4.0                        | 0.2   | -0.3  | -1.1  |
| Industrial                     | 1,054,140 | 908,093(c) | 952,289   | 966,202 | 1,005,408 | -13.9                       | 4.9   | 1.5   | 4.1   |
| <b>Energy Supply:</b>          |           |            |           |         |           |                             |       |       |       |
| Natural Gas Production(d)      | 2,266     | 2,004      | 1,941     | 1,798   | 1,690     | -11.6                       | -3.1  | -7.4  | -6.0  |
| Oil & Condensate Production(e) | 189,748   | 180,351    | 173,892   | 161,623 | 146,825   | -5.0                        | -3.6  | -7.1  | -9.2  |
| Producing Oil Wells            | 23,259    | 23,710     | 22,221    | 21,061  | 19,874    | 1.9                         | -6.3  | -5.2  | -5.6  |
| Producing Gas Wells            | 13,855    | 14,116     | 14,055    | 14,289  | 14,530    | 1.9                         | -0.4  | 1.7   | 1.7   |
| Average Rigs (Monthly average) | 337       | 223        | 259       | 265     | 275       | -33.8                       | 16.1  | 2.3   | 3.8   |

<sup>a</sup>Millions of kilowatt hours.

<sup>b</sup>Millions of cubic feet.

<sup>c</sup>Estimated.

<sup>d</sup>Billions of cubic feet.

<sup>e</sup>Thousands of barrels.

personal income. Note that both bank and thrift deposits are projected to grow faster each year in 1985 and 1986 as a result of projected higher incomes and Wharton's forecast of higher interest rates. Loan growth generally follows deposit behavior at banks. The greater their deposits, the more money financial institutions have to lend. Loan growth, however, should taper off somewhat in 1986, as the growth recession reduces the demand for loans.

### The Energy Sector

*LEM* also contains an energy sector that has the capability of projecting both energy consumption and production in the state. Energy consumption in *LEM* depends upon the level of personal income and energy prices to the consumer. Once again, personal income behavior is detailed in *Table 5*. The growth pattern in the price of electricity and natural gas to the consumer is based on Wharton projections with some judgment applied for unique characteristics of the Louisiana market. This growth pattern for electricity and natural gas prices is given in *Table 8*.

Note that the *gas bubble* that began to develop in 1983 has slowed noticeably the rate of growth in natural gas prices. These prices are expected to grow by less than the rate of inflation over the next two years. The price of electricity, which is produced with natural gas in Louisiana, is expected to behave differently from this pattern because of a unique contractual situation in South Louisiana.

South Louisiana is served heavily by Gulf States Utilities. *GSU* has enjoyed a very low cost gas contract with Exxon for many years. This contract expires January 1, 1985, and *GSU* already has replaced this large contract with several smaller but more expensive agreements. The

firm also has supplanted the Exxon contract with alternate fuel sources and purchased energy. Thus, a one-time jump is expected in electricity utility rates in the *GSU* market area.

Utility rates are expected by *GSU* to rise 1.8 cents per kilowatt hour across all users. The average rates per kilowatt hour for users are residential, 6.2 cents; commercial, 5.5 cents; and industrial, 3.5 cents. *GSU* possesses about one-third of Louisiana's electricity market. Electricity purchasers in the service areas of Louisiana Power and Light and New Orleans Public Service also may receive a shock in 1985, when the nuclear facility at Grand Gulf comes on stream. The exact size of the jolt will depend on the Federal Energy Regulatory Commission and possibly the U.S. courts.

Substantially higher electricity costs will cause the recovery to be adversely affected, although precise estimators are not available from *LEM*. The other reaction to higher electricity costs at the industrial level will be to substitute co-generation for purchased electricity. This, of course, may create additional rate hikes for non-industrial electricity customers.

The energy consumption behavior illustrated in the top five rows of *Table 9* results from plugging projected income movements and the preceding price pattern into the *LEM*. Rapid price increases and recessionary declines in real income caused absolute decreases in energy usage over 1982-83. Generally speaking, consumption is expected to rebound very mildly throughout the forecast period. Electricity demand should be weakened in 1985 and 1986 as the one-time jump in electricity rates is levied.

The bottom section of *Table 9* lists the *LEM* projections for the state's

oil and gas production. The growth rate numbers for the 1982-83 period reveal just how hard this industry was hit over the past two years. However, because Wharton is expecting oil prices to stabilize throughout the forecast period (see *Table 2*), a respectable recovery is expected in Louisiana rig activity. The average number of active rigs running in 1986 is projected to be up to 275 from 223 in 1983; yet, while this is a 23 percent improvement, the rig count will remain well below the 337 level that was boosting the economy in 1982.

There is, as it turns out, a very distinct lag structure existing between rig activity, the number of producing wells, and oil and gas production. Generally speaking, increased rig activity this year leads to an improvement in the number of producing wells one to two years later, and this in turn leads to an improvement in production in the following years.

This lag structure becomes quite apparent in the *LEM* wells and production forecasts. Oil and gas production is projected to fall throughout the forecast period not only because of an aging of Louisiana's fields, but also because of the poor rig count performance over the past two years. This continued deterioration in state production levels will begin to place additional pressures on state tax revenues as severance tax collections continue to fall. It is unclear whether or not the rise in rig count projected from 1984 to 1986 will arrest this problem, since much of the drilling will take place in federal offshore waters, outside of Louisiana's taxing jurisdiction.

### State Summary

Louisiana's economy is expected to continue the recovery in 1985 and



1986 that was fully initiated in 1984. The recovery will spread to most sectors of the economy. *LEM's* forecasts are based on national forecasts made by Wharton econometrics, and in our judgment, the national forecasts may be slightly pessimistic, especially for 1986. Hence, in our judgment, *LEM's* forecasts also are conservative from that perspective.

There are two other factors clouding Louisiana's recovery: the continuing uncertainty in the energy markets which could translate into a drop in oil prices, and the electricity rate shock that will hit customers of Gulf States Utilities and may hit cus-

tomers of Louisiana Power and Light and New Orleans Public Service in 1985. Declining oil prices and electricity rate shocks both will retard the recovery.

#### Metropolitan Forecasts

The *Louisiana Econometric Model* includes detailed employment and income forecasts for seven major metropolitan areas of the state: Alexandria, Baton Rouge, Lafayette, Lake Charles, Monroe, New Orleans, and Shreveport. Employment and income are projected by industrial classifications, including mining; manufacturing; transportation,

communications, and public utilities; wholesale and retail trade; finance, insurance, and real estate; personal and business services; and government.

The metropolitan forecasts obviously parallel the statewide projections in general, though some metropolitan areas will grow more vigorously than others. These forecasts are also subject to the same uncertainties due to the oil markets and the electricity rate shocks, but the statewide projection of modest growth carries over to most of the metropolitan areas. No single region of the state will grow substantially

while other regions decline. Growth among the regions of the state is uneven, but not extremely so. Much of the unevenness in growth among the state's metropolitan regions is related to the impact of the recession.

Table 10 gives the projected growth rates for total non-agricultural employment for each of the state's metropolitan areas. Lafayette and Lake Charles incurred the greatest reduction in unemployment in 1983 and 1984. Both metropolitan areas sustained employment reductions greater than 8 percent. Both cities also are projected to have rapid recovery rates, but we have to recognize the relatively low employment base on which these MSAs are building. These initially high growth areas are clearly not sustainable over the long run. Other metropolitan areas, such as Baton Rouge, which had very minor downturns in 1983 and real growth in 1984, are projected to have more sustainable growth rates of approximately 2 percent in 1985 and 1986.

The most revealing information concerning the relative health of the local economies comes from comparing the level of projected employment in 1985 and 1986 to the actual level of employment in 1982. Such a comparison is shown in Table 11. The 1985-86 employment projections suggest Lafayette and Lake Charles will not exceed their 1982 employment until after 1986. The other metropolitan areas will exceed their 1982 employment by 1985, if not earlier. This suggests that Lafayette and Lake Charles will still be recovering from the shocks of the early 1980s, while other metropolitan areas will be settling into more sustainable employment patterns.

The metropolitan areas are examined further with respect to the composition of the workforce in Table 12. Three metropolitan areas

have combined employment of more than 20 percent of their total non-agricultural workforce in manufacturing and mining. These areas are Lafayette, Lake Charles, and Shreveport. Of these three areas, Lafayette and Lake Charles experienced the most severe decline in employment in 1983.

Mining dominates Lafayette's employment, and petrochemicals dominate manufacturing employment in Lake Charles. Hence, the uncertainty in the energy markets and the readjustments in the petrochemical industry are the major determinants of the degree of severity of the economic downturn in Lafayette and Lake Charles.

Shreveport's manufacturing is not dominated by petrochemicals, but rather by the manufacturing of durables. These markets have been weak for several years, but no new weakness developed in 1983 and 1984. In fact, the economic recovery has spread to the overall manufacturing sector.

While regions in Louisiana have suffered economic slowdown due to the uncertainty in the energy markets and readjustments in petrochemicals, the adverse impacts were most noticeable in Lafayette and Lake Charles. Lafayette will suffer the most if the energy uncertainties are translated into another substantial decline in oil prices. Lake Charles generally would benefit from a drop in energy prices since the petrochemical industries use oil and natural gas as inputs.

Tables 13-26 illustrate projected employment and wage and salary incomes by selected industries for the metropolitan areas of Louisiana. Employment estimates are made for 1985 and 1986. Actual employment is available for 1982, 1983, and the first eight months of 1984. Wage and

salary data lag significantly so the only actual data are for 1982. All other years, even 1983, are estimates.

### Expected MSA Behavior

*Alexandria:* The Alexandria economy grew very modestly from 1982 to 1983 and from 1983 to 1984, but, the Central Louisiana MSA did not experience an absolute reduction in its level of employment. The projected growth in employment for 1985 and 1986 reflects an economy that is holding its own but not accelerating its expansion. Alexandria's economy serves as a trade and service agent for surrounding parishes, so the economic vitality of the MSA depends on the agricultural activities in and around Central Louisiana plus governmental activities. The agricultural sector and the government are not expected to provide a large stimulus to the Alexandria economy.

*Baton Rouge:* The capital suffered major employment reductions in mining, contract construction, manufacturing, and transportation in 1983 and continued reductions in these sectors in 1984. Overall, total employment fell in 1983 and so did wage and salary income. The Baton Rouge economy picked up in 1984 with total employment rising by 1.80 percent and wage and salary income by 4.31 percent. Wage and salary income is projected to rise in 1984, 1985, and 1986 in line with employment growth and inflation.

No one sector of the Baton Rouge economy leads the recovery in 1985 and 1986, though government employment is projected to rise by more than 5 percent. Contract construction, wholesale and retail trade, and the service sectors are projected to register substantial real employment growth in 1986, despite the slowdown at the national level.



The Baton Rouge economy depends on government, trade, services, manufacturing, and construction. Government is a stabilizing agent, as long as the state's revenues hold up and can be a source of growth. Lower oil prices adversely affect the stability of the state's revenues. Manufacturing is more cyclical than government, but has been adjusting to several structural changes in the last several years. Petrochemicals led the manufacturing decline in 1983, but will initiate a recovery in 1985 and 1986. Trade and services are support industries for Baton Rouge and other surrounding areas. Hence, these industries respond to economic activity throughout the general southeastern sector of the state.

**Lafayette:** This South Louisiana metropolitan area had almost 20,000 persons employed in the mining sector of the economy, or more than 20 percent of the total non-agricultural employment, in 1982. Mining employment decreased to an average of 16,700 persons, or almost a 15-percent reduction in the first eight months of 1984. The sudden change experienced by the energy markets caused a reduction in every sector of the 1983 Lafayette economy except services. Only a very moderate rise of less than one-fourth of one percent is expected for 1984.

The oil and gas industry, assuming stable energy prices, is expected to

**TABLE 10**  
Metropolitan Areas Projected Growth  
for Total Nonagricultural Employment  
(in percent)

| Area         | Actual  |         | Projected |         |
|--------------|---------|---------|-----------|---------|
|              | 1982-83 | 1983-84 | 1984-85   | 1985-86 |
| Alexandria   | 0.19    | 0.56    | 0.65      | 1.47    |
| Baton Rouge  | -0.15   | 1.80    | 1.84      | 2.39    |
| Lafayette    | -8.32   | 0.23    | 4.30      | 3.90    |
| Lake Charles | -3.59   | -4.70   | 2.69      | 1.64    |
| Monroe       | 0.00    | -1.17   | 3.43      | 1.89    |
| New Orleans  | -2.10   | 0.78    | 2.12      | 1.20    |
| Shreveport   | -1.93   | 1.70    | 3.71      | 2.93    |

**TABLE 11**  
Actual Employment in 1982 and Projected Employment  
in 1985 and 1986 for Metropolitan Areas

| Area         | Actual  | Projected |         |
|--------------|---------|-----------|---------|
|              | 1982    | 1985      | 1986    |
| Alexandria   | 53,600  | 54,350    | 55,150  |
| Baton Rouge  | 205,800 | 213,050   | 218,140 |
| Lafayette    | 96,100  | 92,101    | 95,689  |
| Lake Charles | 64,000  | 60,380    | 61,370  |
| Monroe       | 51,300  | 52,440    | 53,430  |
| New Orleans  | 514,800 | 518,700   | 524,900 |
| Shreveport   | 150,100 | 154,750   | 159,300 |

**TABLE 12**  
Composition of Workforce  
for Metropolitan Areas, 1982

| Area         | Percent of Nonagricultural Employment in Selected Industries |        |               |                                                              |
|--------------|--------------------------------------------------------------|--------|---------------|--------------------------------------------------------------|
|              | Construction                                                 | Mining | Manufacturing | Transportation,<br>Public Utilities<br>& Communica-<br>tions |
| Alexandria   | 6.5                                                          | -      | 10.2          | 4.7                                                          |
| Baton Rouge  | 10.8                                                         | 0.6    | 12.2          | 5.0                                                          |
| Lafayette    | 6.4                                                          | 70.3   | 4.9           | 7.8                                                          |
| Lake Charles | 10.0                                                         | 4.0    | 17.2          | 7.3                                                          |
| Monroe       | 5.8                                                          | 1.3    | 14.4          | 5.4                                                          |
| New Orleans  | 6.0                                                          | 4.0    | 9.0           | 10.1                                                         |
| Shreveport   | 5.7                                                          | 4.9    | 17.1          | 6.3                                                          |

\*Mining employment is included in the Services sector.

**TABLE 13**  
**Selected Nonagricultural Wage and Salary Employment**  
**Alexandria**

| Sector                                              | Actual(a)     |               | Projected     |               |               | Average Annual Growth Rates |            |            |             |
|-----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----------------------------|------------|------------|-------------|
|                                                     | 1982          | 1983          | 1984*         | 1985          | 1986          | 82-83                       | 83-84      | 84-85      | 85-86       |
| Construction                                        | 3,500         | 3,400         | 3,300         | 3,400         | 3,400         | -2.86                       | -2.94      | 3.03       | 0           |
| Manufacturing                                       | 5,500         | 5,300         | 5,400         | 5,300         | 5,350         | -3.64                       | 1.89       | -1.85      | .94         |
| Transportation, Communications,<br>Public Utilities | 2,500         | 2,500         | 2,500         | 2,550         | 2,600         | 0                           | 0          | 2.00       | 1.96        |
| Wholesale & Retail Trade                            | 12,000        | 12,300        | 12,500        | 12,600        | 12,800        | 2.50                        | 1.63       | .80        | 1.59        |
| Finance, Insurance &<br>Real Estate                 | 3,000         | 2,900         | 2,900         | 2,800         | 2,900         | 3.33                        | 0          | -3.45      | 3.57        |
| Services & Mining                                   | 11,400        | 11,600        | 11,700        | 12,000        | 12,200        | 1.75                        | .86        | 2.56       | 1.67        |
| Government                                          | 15,800        | 15,700        | 15,700        | 15,700        | 15,900        | -.63                        | 0          | 0          | 1.27        |
| <b>TOTAL</b>                                        | <b>53,600</b> | <b>53,700</b> | <b>54,000</b> | <b>54,350</b> | <b>55,150</b> | <b>.19</b>                  | <b>.56</b> | <b>.65</b> | <b>1.47</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

**TABLE 14**  
**Selected Wage, Salary, and Proprietor's Income Data**  
**Alexandria**

| Sector                                              | Actual(a)      |                | Projected      |                |                | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982           | 1983           | 1984           | 1985           | 1986           | 82-83                       | 83-84       | 84-85       | 85-86       |
| Construction                                        | 52,575         | 54,166         | 54,668         | 58,865         | 62,145         | 3.03                        | .93         | 7.68        | 5.57        |
| Manufacturing                                       | 76,934         | 71,911         | 73,801         | 78,832         | 84,508         | -6.53                       | 2.63        | 6.82        | 7.20        |
| Transportation, Communications,<br>Public Utilities | 58,416         | 61,365         | 65,058         | 70,470         | 77,171         | 5.05                        | 6.02        | 8.32        | 9.51        |
| Wholesale & Retail Trade                            | 123,784        | 127,563        | 133,543        | 142,052        | 150,507        | 3.05                        | 4.69        | 6.37        | 5.95        |
| Finance, Insurance &<br>Real Estate                 | 37,824         | 38,236         | 39,895         | 41,047         | 44,774         | 1.09                        | 4.34        | 2.89        | 9.08        |
| Services & Mining                                   | 153,732        | 160,540        | 169,145        | 181,300        | 196,123        | 4.43                        | 5.36        | 7.19        | 8.18        |
| Government                                          | 256,253        | 264,968        | 276,358        | 291,433        | 310,001        | 3.40                        | 4.30        | 5.45        | 6.37        |
| <b>TOTAL</b>                                        | <b>759,518</b> | <b>778,749</b> | <b>812,468</b> | <b>863,999</b> | <b>925,229</b> | <b>2.53</b>                 | <b>4.33</b> | <b>6.34</b> | <b>7.09</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce.

**TABLE 15**  
**Selected Nonagricultural Wage and Salary Employment**  
**Baton Rouge**

| Sector                                              | Actual(a)      |                | Projected      |                |                | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982           | 1983           | 1984*          | 1985           | 1986           | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 1,400          | 1,000          | 900            | 950            | 940            | -28.57                      | -10.00      | 5.56        | -1.05       |
| Contract Construction                               | 22,200         | 20,600         | 20,300         | 20,800         | 22,100         | -7.21                       | -1.46       | 2.46        | 6.25        |
| Manufacturing                                       | 25,100         | 22,400         | 22,100         | 22,500         | 22,800         | -10.76                      | -1.34       | 1.81        | 1.33        |
| Transportation, Communications,<br>Public Utilities | 10,400         | 10,100         | 9,900          | 10,000         | 10,100         | -2.88                       | -1.98       | 1.01        | 1.00        |
| Wholesale & Retail Trade                            | 46,400         | 48,200         | 50,600         | 51,600         | 53,000         | 3.88                        | 4.98        | 1.98        | 2.71        |
| Finance, Insurance &<br>Real Estate                 | 12,000         | 12,200         | 12,500         | 12,700         | 12,800         | 1.67                        | 2.46        | 1.60        | 0.79        |
| Services                                            | 37,200         | 38,300         | 39,700         | 40,900         | 42,200         | 2.96                        | 3.66        | 3.02        | 3.18        |
| Government                                          | 51,100         | 52,700         | 53,200         | 54,100         | 54,600         | 3.13                        | 0.95        | 1.69        | 0.92        |
| <b>TOTAL</b>                                        | <b>205,800</b> | <b>205,500</b> | <b>209,200</b> | <b>213,050</b> | <b>218,140</b> | <b>-0.15</b>                | <b>1.80</b> | <b>1.84</b> | <b>2.39</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

**TABLE 16**  
**Selected Non-Agricultural Wage, Salary, and Proprietor's Income**  
**Baton Rouge**

| Sector                                              | Actual(a)        |                  | Projected        |                  |                  | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982             | 1983             | 1984             | 1985             | 1986             | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 39,016           | 33,290           | 34,092           | 33,500           | 35,100           | -14.68                      | 2.41        | -1.74       | 4.78        |
| Contract Construction                               | 555,460          | 520,326          | 515,184          | 546,645          | 594,399          | -6.33                       | -0.99       | 6.11        | 8.74        |
| Manufacturing                                       | 853,883          | 759,209          | 795,047          | 837,502          | 951,096          | -11.09                      | 4.72        | 5.34        | 13.56       |
| Transportation, Communications,<br>Public Utilities | 275,211          | 273,206          | 272,561          | 293,272          | 313,830          | -0.73                       | -0.24       | 7.60        | 7.01        |
| Wholesale & Retail Trade                            | 670,526          | 703,708          | 738,640          | 784,408          | 835,988          | 4.95                        | 4.96        | 6.20        | 6.58        |
| Finance, Income, Real Estate                        | 224,103          | 241,642          | 256,927          | 273,075          | 285,201          | 7.83                        | 6.33        | 6.29        | 4.44        |
| Services                                            | 724,412          | 768,826          | 822,874          | 894,687          | 979,560          | 6.13                        | 7.03        | 8.73        | 9.49        |
| Government                                          | 814,750          | 852,900          | 896,638          | 952,301          | 1,028,458        | 4.68                        | 5.13        | 6.21        | 8.00        |
| <b>TOTAL</b>                                        | <b>4,157,361</b> | <b>4,153,107</b> | <b>4,331,963</b> | <b>4,663,999</b> | <b>5,023,632</b> | <b>-0.10</b>                | <b>4.31</b> | <b>6.54</b> | <b>8.85</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce, complete printout.

**TABLE 17**  
**Selected Nonagricultural Wage and Salary Employment**  
**Lafayette**

| Sector                                              | Actual(a)     |               |               | Projected     |               | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982          | 1983          | 1984*         | 1985          | 1986          | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 19,600        | 16,400        | 16,600        | 17,201        | 17,889        | -16.33                      | 1.22        | 3.62        | 4.00        |
| Contract Construction                               | 6,200         | 5,300         | 5,000         | 5,400         | 5,600         | -14.52                      | -5.66       | 8.00        | 3.70        |
| Manufacturing                                       | 4,700         | 3,700         | 3,800         | 4,000         | 4,200         | -21.28                      | 2.70        | 5.26        | 5.00        |
| Transportation, Communications,<br>Public Utilities | 7,500         | 6,900         | 6,800         | 7,000         | 7,100         | -8.00                       | -1.45       | 2.94        | 1.43        |
| Wholesale & Retail Trade                            | 24,500        | 23,200        | 23,800        | 24,600        | 25,500        | -5.31                       | 2.59        | 3.36        | 3.66        |
| Finance, Insurance &<br>Real Estate                 | 3,600         | 3,800         | 3,800         | 4,200         | 4,500         | 5.56                        | 0           | 10.53       | 7.14        |
| Services                                            | 19,000        | 18,300        | 18,500        | 19,300        | 20,300        | -3.68                       | 1.09        | 4.32        | 5.18        |
| Government                                          | 11,000        | 10,500        | 10,000        | 10,400        | 10,600        | -4.55                       | -4.76       | 4.00        | 1.92        |
| <b>TOTAL</b>                                        | <b>96,100</b> | <b>88,100</b> | <b>88,300</b> | <b>92,101</b> | <b>95,689</b> | <b>-8.32</b>                | <b>0.23</b> | <b>4.30</b> | <b>3.90</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

**TABLE 18**  
**Selected Non-Agricultural Wage, Salary, and Proprietor's Income**  
**Lafayette**

| Sector                                              | Actual(a)        |                  |                  | Projected        |                  | Average Annual Growth Rates |             |             |              |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------|-------------|-------------|--------------|
|                                                     | 1982             | 1983             | 1984             | 1985             | 1986             | 82-83                       | 83-84       | 84-85       | 85-86        |
| Mining                                              | 672,793          | 580,215          | 606,725          | 670,084          | 758,413          | -13.76                      | 4.57        | 10.44       | 13.18        |
| Contact Construction                                | 155,473          | 143,950          | 137,224          | 135,771          | 139,861          | -7.41                       | -4.67       | -1.06       | 3.01         |
| Manufacturing                                       | 141,860          | 131,256          | 148,084          | 168,343          | 197,823          | -7.47                       | 12.82       | 13.68       | 17.51        |
| Transportation, Communications,<br>Public Utilities | 207,267          | 223,668          | 244,176          | 273,441          | 311,789          | 7.91                        | 9.17        | 11.99       | 14.02        |
| Wholesale & Retail Trade                            | 397,648          | 380,335          | 410,417          | 447,971          | 490,701          | -4.35                       | 7.91        | 9.15        | 9.54         |
| Finance, Income, Real Estate                        | 76,727           | 79,875           | 88,814           | 98,939           | 113,719          | 4.10                        | 11.19       | 11.40       | 14.94        |
| Services                                            | 450,948          | 470,303          | 514,853          | 566,227          | 644,612          | 4.29                        | 9.47        | 9.98        | 13.84        |
| Government                                          | 205,790          | 211,082          | 225,340          | 241,364          | 266,766          | 2.57                        | 6.75        | 7.11        | 10.53        |
| <b>TOTAL</b>                                        | <b>2,308,506</b> | <b>2,220,684</b> | <b>2,375,633</b> | <b>2,602,140</b> | <b>2,923,694</b> | <b>-3.80</b>                | <b>6.98</b> | <b>9.53</b> | <b>12.36</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce, complete printout.

**TABLE 19**  
**Selected Nonagricultural Wage and Salary Employment**  
**Lake Charles**

| Sector                                              | Actual(a)     |               |               | Projected     |               | Average Annual Growth Rates |              |             |             |
|-----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----------------------------|--------------|-------------|-------------|
|                                                     | 1982          | 1983          | 1984*         | 1985          | 1986          | 82-83                       | 83-84        | 84-85       | 85-86       |
| Mining                                              | 2,600         | 2,400         | 2,300         | 2,200         | 2,200         | -7.69                       | -4.17        | -4.35       | 0           |
| Contract Construction                               | 6,400         | 6,500         | 4,600         | 4,800         | 5,000         | 1.56                        | -29.23       | 4.35        | 4.17        |
| Manufacturing                                       | 11,000        | 9,700         | 9,200         | 9,480         | 9,670         | -11.82                      | -5.15        | 3.04        | 2.00        |
| Transportation, Communications,<br>Public Utilities | 4,700         | 4,400         | 4,500         | 4,400         | 4,400         | -6.38                       | 2.27         | -2.22       | 0           |
| Wholesale & Retail Trade                            | 15,000        | 14,400        | 13,900        | 14,500        | 14,700        | -4.00                       | -3.41        | 4.32        | 1.38        |
| Finance, Insurance &<br>Real Estate                 | 2,900         | 2,900         | 3,000         | 3,100         | 3,100         | 0                           | 3.45         | 3.33        | 0           |
| Services                                            | 10,800        | 10,900        | 10,800        | 11,000        | 11,300        | 0.93                        | -.92         | 1.85        | 2.73        |
| Government                                          | 10,600        | 10,500        | 10,500        | 10,900        | 11,000        | -0.94                       | 0            | 3.81        | 0.92        |
| <b>TOTAL</b>                                        | <b>64,000</b> | <b>61,700</b> | <b>58,800</b> | <b>60,380</b> | <b>61,370</b> | <b>-3.59</b>                | <b>-4.70</b> | <b>2.69</b> | <b>1.64</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

**TABLE 20**  
**Selected Non-Agricultural Wage, Salary, and Proprietor's Income**  
**Lake Charles**

| Sector                                              | Actual (a)       |                  | Projected        |                  |                  | Average Annual Growth Rates |              |             |             |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------|--------------|-------------|-------------|
|                                                     | 1982             | 1983             | 1984             | 1985             | 1986             | 82-83                       | 83-84        | 84-85       | 85-86       |
| Mining                                              | 89,851           | 74,762           | 65,901           | 64,775           | 65,714           | -16.79                      | -11.85       | -1.71       | 1.45        |
| Contact Construction                                | 181,002          | 142,877          | 111,397          | 121,437          | 126,557          | -21.06                      | -22.03       | 9.01        | 4.22        |
| Manufacturing                                       | 411,005          | 376,816          | 380,199          | 415,057          | 458,448          | -8.32                       | 0.90         | 9.17        | 10.45       |
| Transportation, Communications,<br>Public Utilities | 125,474          | 128,242          | 135,491          | 141,634          | 150,917          | 2.21                        | 5.65         | 4.53        | 6.55        |
| Wholesale & Retail Trade                            | 199,082          | 194,053          | 189,794          | 207,978          | 224,004          | -2.53                       | -2.19        | 9.58        | 7.71        |
| Finance, Income, Real Estate                        | 43,537           | 46,941           | 50,385           | 53,913           | 57,077           | 7.82                        | 7.34         | 7.00        | 5.87        |
| Services                                            | 207,300          | 209,744          | 220,035          | 234,524          | 252,280          | 1.18                        | 4.91         | 6.58        | 7.57        |
| Government                                          | 163,454          | 172,199          | 181,991          | 194,746          | 211,713          | 5.35                        | 5.69         | 7.01        | 8.71        |
| <b>TOTAL</b>                                        | <b>1,420,705</b> | <b>1,345,634</b> | <b>1,335,193</b> | <b>1,434,064</b> | <b>1,546,710</b> | <b>-5.28</b>                | <b>-0.78</b> | <b>7.41</b> | <b>7.86</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce, complete printout.

**TABLE 21**  
**Selected Nonagricultural Wage and Salary Employment**  
**Monroe**

| Sector                                              | Actual(A)     |               | Projected     |               |               | Average Annual Growth Rates |              |             |             |
|-----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----------------------------|--------------|-------------|-------------|
|                                                     | 1982          | 1983*         | 1984          | 1985          | 1986          | 82-83                       | 83-84        | 84-85       | 85-86       |
| Mining                                              | 700           | 500           | 500           | 340           | 330           | -28.57                      | 0            | -32.00      | -2.94       |
| Contract Construction                               | 3,000         | 3,000         | 2,500         | 2,600         | 2,700         | 0                           | -16.7        | 4.00        | 3.85        |
| Manufacturing                                       | 7,400         | 7,100         | 7,000         | 7,200         | 7,300         | -4.05                       | -1.41        | 2.86        | 1.39        |
| Transportation, Communications,<br>Public Utilities | 2,800         | 2,700         | 2,700         | 2,700         | 2,700         | -3.57                       | 0            | 0           | 0           |
| Wholesale & Retail Trade                            | 13,200        | 14,100        | 14,200        | 14,400        | 14,500        | 6.82                        | .71          | 1.41        | .69         |
| Finance, Insurance &<br>Real Estate                 | 3,900         | 4,000         | 4,100         | 4,200         | 4,300         | 2.56                        | 2.50         | 2.44        | 2.38        |
| Services                                            | 9,900         | 10,100        | 10,200        | 10,900        | 11,200        | 2.02                        | 1.98         | 5.83        | 2.75        |
| Government                                          | 10,400        | 9,800         | 9,500         | 10,100        | 10,400        | -5.77                       | .99          | 6.32        | 2.97        |
| <b>TOTAL</b>                                        | <b>51,300</b> | <b>51,300</b> | <b>50,700</b> | <b>52,440</b> | <b>53,430</b> | <b>0</b>                    | <b>-1.17</b> | <b>3.43</b> | <b>1.89</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

rise again in 1985 and 1986, but not by the substantial increase rate of the late 1970s. Mining employment in Lafayette is not expected to reach its 1982 level until after 1986. Oil and gas recovery, however, will lead to increasing activity in construction, manufacturing, and the support industries such as trade and services.

The Lafayette metropolitan area is most sensitive to the uncertainties prevailing in the energy market and would be particularly affected if oil prices did not hold at the projected \$29.00 per barrel. Swings in the price of oil affect the southcentral region of the state more dramatically than its other regions.

**Lake Charles:** This Southwestern Louisiana MSA includes a large manufacturing component in which petrochemicals dominate. The petrochemical segment of the U.S. economy sagged badly in 1983 and 1984, which was reflected by a reduction in Lake Charles manufacturing employment from 11,000 in

1982 to 9,200 in 1984. Petrochemicals are expected to rebound in 1985 and 1986 by growth rates of 3.0 percent and 2.0 percent, respectively.

Manufacturing growth also will be reflected by development in the construction sector and in the support sectors. Despite this growth, Lake Charles is still projected to be lagging behind its earlier performance. Some 64,000 persons were employed in non-agricultural jobs in Lake Charles in 1982, while in 1986 the projected number of jobs is 61,370. Wage and salary increases are expected to grow in 1985 and 1986 due to the modest growth in employment and inflationary forces.

**Monroe:** This Northeast Louisiana metropolitan area has had a relatively slow real growth rate for several years. Total non-agricultural employment growth was less than one percent from 1982 to 1983. Employment is projected to grow in 1985 and 1986 by 3.43 and 1.89 percent, respectively, which represents a ma-

jor improvement over 1983 and 1984.

The growth industries in Monroe will be trade, services, finance, insurance, and real estate. These are the so-called support industries, reacting to basic industries within the metropolitan area and to core industries outside. The basic industry outside this metropolitan area is agriculture.

**New Orleans:** The Crecent City's metropolitan area had 514,800 persons employed in 1982. The average number of persons employed in the New Orleans MSA dropped to 507,950 in the first eight months of 1984, but this was up from the 504,000 persons employed in 1983.

The basic industries—mining, manufacturing, and transportation, communications, and public utilities—declined in 1983 and 1984, but all show significant projected growth in 1985 and more modest growth in 1986. The New Orleans economy is

**TABLE 22**  
Selected Non-Agricultural Wage, Salary, and Proprietor's Income  
Monroe

| Sector                                              | Actual(a)      |                | Projected      |                  |                  | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|----------------|----------------|----------------|------------------|------------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982           | 1983           | 1984           | 1985             | 1986             | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 23,780         | 12,478         | 10,802         | 10,633           | 10,733           | -47.50                      | -13.43      | -1.56       | .94         |
| Contract Construction                               | 72,155         | 72,902         | 64,898         | 68,780           | 76,056           | 1.04                        | -11.0       | 5.98        | 10.6        |
| Manufacturing                                       | 177,597        | 162,885        | 166,951        | 184,236          | 201,672          | -8.28                       | 2.50        | 10.35       | 9.46        |
| Transportation, Communications,<br>Public Utilities | 75,188         | 73,412         | 71,567         | 70,389           | 66,895           | -2.36                       | -2.51       | -1.65       | -4.96       |
| Wholesale & Retail Trade                            | 185,450        | 199,066        | 206,934        | 218,465          | 229,919          | 7.34                        | 3.95        | 5.57        | 5.24        |
| Finance, Income, Real Estate                        | 70,181         | 74,195         | 78,657         | 85,399           | 92,695           | 5.72                        | 6.01        | 8.57        | 8.54        |
| Services                                            | 169,484        | 178,512        | 189,785        | 204,642          | 220,524          | 5.33                        | 6.31        | 7.83        | 7.76        |
| Government                                          | 143,104        | 147,824        | 154,009        | 162,227          | 172,346          | 3.30                        | 4.18        | 5.34        | 6.24        |
| <b>TOTAL</b>                                        | <b>916,939</b> | <b>921,274</b> | <b>943,603</b> | <b>1,004,771</b> | <b>1,070,840</b> | <b>.47</b>                  | <b>2.42</b> | <b>6.48</b> | <b>6.58</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce, complete printout.

**TABLE 23**  
Selected Nonagricultural Wage and Salary Employment  
New Orleans

| Sector                                              | Actual(a)      |                | Projected      |                |                | Average Annual Growth Rates |            |             |             |
|-----------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|------------|-------------|-------------|
|                                                     | 1982           | 1983           | 1984*          | 1985           | 1986           | 82-83                       | 83-84      | 84-85       | 85-86       |
| Mining                                              | 20,600         | 18,600         | 18,500         | 18,000         | 18,100         | -9.71                       | -0.54      | -2.70       | 1.60        |
| Contract Construction                               | 31,000         | 30,400         | 31,200         | 31,300         | 32,200         | -1.94                       | 2.63       | 0.32        | 2.88        |
| Manufacturing                                       | 46,400         | 40,900         | 39,500         | 41,600         | 42,100         | -11.85                      | -3.42      | 5.32        | 1.20        |
| Transportation, Communications,<br>Public Utilities | 52,100         | 47,200         | 46,450         | 48,200         | 47,950         | -9.40                       | -1.59      | 3.77        | .62         |
| Wholesale & Retail Trade                            | 129,500        | 128,600        | 130,700        | 133,700        | 135,400        | -.69                        | 1.63       | 2.30        | 1.27        |
| Finance, Insurance &<br>Real Estate                 | 31,300         | 31,800         | 31,600         | 32,100         | 32,300         | 1.60                        | -.63       | 1.58        | .62         |
| Services                                            | 121,200        | 122,400        | 124,800        | 125,800        | 127,500        | 0.99                        | 1.96       | 0.80        | 1.35        |
| Government                                          | 82,800         | 84,100         | 85,200         | 87,200         | 88,400         | 1.57                        | 1.31       | 2.35        | 1.38        |
| <b>TOTAL</b>                                        | <b>514,800</b> | <b>504,000</b> | <b>507,950</b> | <b>518,700</b> | <b>524,900</b> | <b>-2.10</b>                | <b>.78</b> | <b>2.12</b> | <b>1.20</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

reacting to the anticipated pattern of the national economy and to the general uncertainties of the oil markets.

The support industries—trade; services; and finance, insurance, and real estate—will grow modestly in both 1985 and 1986. These industries expanded or remained stable for the most part even though the basic industries declined. Hence, they do not have to catch up in terms of employment. Wage and salary income will rise in line with inflation and real

employment in the New Orleans metropolitan area.

*Shreveport:* This Northeast Louisiana MSA suffered a reduction in non-agricultural employment from 1982 to 1983 of almost 2 percent, or approximately 4,000 jobs. The Shreveport economy has started to improve in 1984, particularly in the manufacturing sector. The 1984 growth in non-agricultural employment is expected to be about 1.7 percent.

Shreveport's 1985 employment growth is projected to be 3.7 percent, with major gains occurring in manufacturing wholesale and retail trade, services, and government. Overall employment is projected to grow at 2.9 percent in 1986, and manufacturing employment is still predicted to be quite strong. Wage and salary income is expected to grow in line with employment estimates and inflation.

In summary, those metropolitan

**TABLE 24**  
**Selected Nonagricultural Wage, Salary, and Proprietor's Income**  
**New Orleans**

| Sector                                              | Actual(a)         |                   | Projected         |                   |                   | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982              | 1983              | 1984              | 1985              | 1986              | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 804,281           | 770,410           | 803,925           | 863,547           | 936,730           | -4.21                       | 4.35        | 7.42        | 8.47        |
| Contract Construction                               | 993,344           | 988,328           | 1,006,025         | 1,074,183         | 1,151,740         | -.50                        | 1.79        | 6.77        | 7.22        |
| Manufacturing                                       | 1,567,282         | 1,384,165         | 1,432,394         | 1,595,968         | 1,767,074         | -11.68                      | 3.48        | 11.42       | 10.72       |
| Transportation, Communications,<br>Public Utilities | 1,494,076         | 1,518,019         | 1,633,440         | 1,730,032         | 1,832,951         | 1.60                        | 7.60        | 5.91        | 5.95        |
| Wholesale & Retail Trade                            | 2,053,845         | 2,102,075         | 2,209,675         | 2,374,476         | 2,535,380         | 2.35                        | 5.12        | 7.46        | 6.78        |
| Finance, Income, Real Estate                        | 682,198           | 733,780           | 733,069           | 830,627           | 891,291           | 7.56                        | 5.35        | 7.45        | 7.30        |
| Services                                            | 2,371,531         | 2,470,569         | 2,599,361         | 2,773,949         | 2,981,523         | 4.18                        | 5.21        | 6.72        | 7.48        |
| Government                                          | 1,590,740         | 1,666,057         | 1,771,687         | 1,883,769         | 2,023,852         | 4.73                        | 6.34        | 6.33        | 7.43        |
| <b>TOTAL</b>                                        | <b>11,557,297</b> | <b>11,633,403</b> | <b>12,229,576</b> | <b>13,126,578</b> | <b>14,120,541</b> | <b>0.66</b>                 | <b>5.12</b> | <b>7.33</b> | <b>7.57</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce, complete printout.

**TABLE 25**  
**Selected Nonagricultural Wage and Salary Employment**  
**Shreveport**

| Sector                                              | Actual(a)      |                | Projected      |                |                | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982           | 1983           | 1984*          | 1985           | 1986           | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 7,400          | 6,200          | 6,500          | 6,700          | 6,700          | -16.22                      | 4.84        | 3.08        | 0           |
| Contract Construction                               | 8,600          | 9,100          | 9,300          | 9,600          | 9,900          | 5.81                        | 2.20        | 3.23        | 3.13        |
| Manufacturing                                       | 25,600         | 25,100         | 25,500         | 26,600         | 27,800         | -9.77                       | 1.59        | 4.31        | 4.51        |
| Transportation, Communications,<br>Public Utilities | 9,500          | 9,300          | 9,300          | 9,000          | 9,700          | -2.11                       | 0           | -3.23       | 7.78        |
| Wholesale & Retail Trade                            | 35,400         | 34,100         | 33,800         | 35,200         | 36,100         | -3.67                       | 0.88        | 4.14        | 2.56        |
| Finance, Insurance &<br>Real Estate                 | 7,600          | 8,000          | 8,100          | 8,250          | 8,300          | 5.26                        | 1.25        | 1.85        | 0.61        |
| Services                                            | 30,700         | 31,300         | 31,800         | 33,100         | 33,900         | 1.95                        | 1.60        | 4.09        | 2.42        |
| Government                                          | 25,200         | 26,000         | 25,300         | 26,700         | 27,300         | 3.17                        | -2.69       | 5.53        | 2.25        |
| <b>TOTAL</b>                                        | <b>150,000</b> | <b>147,100</b> | <b>149,600</b> | <b>155,150</b> | <b>159,700</b> | <b>-1.93</b>                | <b>1.70</b> | <b>3.71</b> | <b>2.93</b> |

\*Department of Employment Security, Louisiana Department of Labor.

\*Average of first eight months.

**TABLE 26**  
**Selected Non-Agricultural Wage, Salary, and Proprietor's Income**  
**Shreveport**

| Sector                                              | Actual(a)        |                  | Projected        |                  |                  | Average Annual Growth Rates |             |             |             |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------|-------------|-------------|-------------|
|                                                     | 1982             | 1983             | 1984             | 1985             | 1986             | 82-83                       | 83-84       | 84-85       | 85-86       |
| Mining                                              | 236,381          | 213,862          | 221,720          | 235,178          | 253,034          | -9.53                       | 3.67        | 6.07        | 7.59        |
| Contract Construction                               | 168,623          | 179,634          | 189,215          | 201,334          | 216,411          | 6.53                        | 5.33        | 6.40        | 7.49        |
| Manufacturing                                       | 517,236          | 563,398          | 564,670          | 611,555          | 635,633          | 8.92                        | 0.23        | 8.30        | 3.94        |
| Transportation, Communications,<br>Public Utilities | 247,150          | 253,910          | 264,573          | 274,969          | 301,449          | 2.74                        | 4.20        | 3.93        | 9.63        |
| Wholesale & Retail Trade                            | 488,119          | 502,273          | 528,249          | 561,857          | 600,804          | 2.90                        | 5.17        | 6.36        | 6.93        |
| Finance, Income, Real Estate                        | 139,453          | 155,660          | 163,060          | 173,816          | 182,243          | 11.62                       | 4.75        | 6.60        | 4.85        |
| Services                                            | 480,084          | 475,349          | 500,587          | 533,581          | 572,853          | -0.99                       | 5.31        | 6.59        | 7.36        |
| Government                                          | 498,348          | 524,407          | 552,004          | 583,175          | 622,004          | 5.23                        | 5.26        | 5.65        | 6.66        |
| <b>TOTAL</b>                                        | <b>2,775,394</b> | <b>2,868,493</b> | <b>2,984,078</b> | <b>3,175,465</b> | <b>3,384,431</b> | <b>3.35</b>                 | <b>4.03</b> | <b>6.41</b> | <b>6.58</b> |

\*Regional Economics Information Service, Bureau of Economic Analysis, U.S. Department of Commerce, complete printout.

areas with diversified economic bases are projected to experience a steadier growth trend than those MSAs closely identified as being dependent upon a single major industry. This result should not be surprising.

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## NATIONAL NEWS

### Tax Shelter Law

The *Deficit Reduction Law of 1984* is cutting down on abusive tax shelters. The law requires tax shelters to be registered, promoters to maintain lists of investors, and investors to record the registration number of their tax shelter on their individual income tax returns. It will enable the IRS to efficiently identify tax shelters and those who invest in them.

Tax shelters requiring registration are those which represent to investors a tax-benefit-to-investment ratio of at least two-to-one, where the sum of deductions and twice the amount of tax credits is greater than twice the amount of actual investment. Also, where that ratio exists and the shelter involves at least \$250,000 in total investment with at least five investors, and is subject to federal or state securities regulation, then IRS registration is required.

Promoters must file a *Form 8264, Application for Registration of a Tax Shelter*, available from any IRS office. Penalties are being assessed all registrants who failed to file prior to the September 30 deadline. Registration is required before any investment offering can be made.

### 1984 Tax Act Booklet

*Your Business and the 1984 Tax Act* is the title of a booklet produced by the Independent Business Institute. The report provides a concise description of all business tax changes under the new law. Persons desiring a copy of this free booklet should send \$1 to cover postage and handling, and request *Report No. 600* from the Independent Business Institute, P.O. Box 159, Akron, OH 44309.

### Housing Forecast Is Good

Housing activity is predicted to be healthy through the winter, according to Data Resources, Inc. (DRI).

The firm cites a temporary easing of credit by the Federal Reserve Bank as being responsible. DRI made an upward revision of its projections for housing starts from 1.58 million in the fourth quarter of 1984 and 1.46 million units in the first quarter of 1985 to 1.7 million and 1.68 million, respectively. These levels still will be no more than equal to or less than the year-earlier figures. The firm expects interest rates to rise in the first half of 1985 because of government borrowing to cover deficits. DRI expects starts will decline to a 1.4 to 1.5 million-unit range by the end of 1985.

### Americans Expect Discounts

Americans overwhelmingly pay less than full price for the vast majority of their general merchandise purchases, but are doing it in discount stores only one-third of the time. Some 80 percent of shoppers say they usually pay discounted prices for consumer electronics items; 77 percent, major appliances; 73 percent, sporting goods; 70 percent, toys; 64 percent, casual clothes; 59 percent, dressy clothes; 54 percent, automotive supplies.

Sears, J. C. Penney, and Montgomery Ward generate 54 percent of this discount volume on the strength of heavily advertised sales. Department stores draw 9 percent. The remaining 37 percent is attracted by full-line discount chains, catalog showroom firms, and specialty discounters. These were among major findings of a national consumer survey conducted for *Discount Store News*. A total of 1,688 households were polled on their pricing expectations of general merchandise products.

### Retailers Miss Affluent Market

The vast majority of American retail companies are ignoring the huge market potential of senior citizens, according to *Chain Store Age Executive*, which points out the so-called *mature market* accounts for \$575 billion in personal household

income—nearly one-third of the national total. This group, numbering 47 million people and expected to grow to 59 million by the year 2000 (one out of four Americans), represents the fifty-five and older market. It controls 28 percent of all U.S. discretionary income. The report finds retailers generally are unaware this group has money to spend—thirty cents out of every dollar, as compared to fifteen cents for individuals under age fifty-five.

### Family Buying Power Shows Fall

Inflation and direct federal taxes have eroded the prototypical U.S. family's purchasing power, measured in constant 1974 dollars, by \$801, according to analysts for the Tax Foundation, Washington-based tax organization. The typical family—one earner employed full-time, year-round, married, with two dependent children—has 7.3 percent less purchasing power in 1984 than it had in 1974. The economists say this erosion has occurred despite the recent slowing of inflation and reductions in individual income taxes.

This downward trend in the family's real income—after federal taxes—has been reversed in recent years, although the real purchasing power of the family declined on the average every year from 1976 to 1981. The reversal was due to the rate reduction in the *Economic Recovery Tax Act of 1981* and the recent drop in the rate of inflation, which caused real purchasing power after federal taxes to rise since 1982. It is estimated that the family's purchasing power, in constant dollars, will be 5.6 percent higher this year than it was in 1981—yet it is still lower than it was ten years ago.

### Windfall Profits Tax Refunds

Windfall profits tax refunds may still be available to persons filing an amended return, *Form 1040X*, within three years of the date they filed their original returns. Persons whose qualified royalty production is no more than two barrels per day are

entitled to a refund of the total Windfall profits taxes withheld. If production exceeds two barrels per day, a computation will be necessary to determine how much of the total tax withheld is refundable. Also, by filing Form 6783 now, they indicate to the withholding agent that some or all of their production is exempt. This means that they receive a current benefit from the Windfall profit taxes that might otherwise have been withheld.

### Audio-visual Competition Is Set

The Society for Technical Communication (STC) has announced the opening of its eighth annual audio-visual competition to recognize excellence in audio-visual communication dealing with technology, science, industry, business, medicine, and government. Media formats are limited to 35mm filmstrips and slide and tape programs with a two-tray maximum. Competition categories are Marketing, Industrial Instruction, Law Enforcement, Safety, Consumer Education, and Medical/Health topics for professionals and lay audiences. The entry deadline is January 25, 1985. Winning entries will be screened and awards presented at STC's Thirty-second International Technical Communication Conference, May 19 to 23, at Houston. Information and entry forms are available from S. M. Shelton, 332 Iowa Ct., Ridgecrest, CA 93555.

play a vital role in helping the Louisiana Department of Commerce and Industry to pursue ways of creating labor-orientated businesses for the state. Regis Allison, small business programs specialist for Commerce and Industry, agrees. "The state of Louisiana benefits from any inventions or innovations that have a chance of making it on the market," he said.

The *Innovation Center's* first year of operation resulted in evaluations of fifty-two projects. One of the more promising of these innovations included a water transportation system for carrying bottled water from container to kitchen spigots and automatic icemakers (without the necessity of having a dispenser). Another invention is a new industrial lubricating compound which is about half as expensive as the machine greases on the market. A third device being handled by the *Center* is a pallet dismantling and repairing machine.

Kedia said most inventors do not know what to do with their products once they have created them. The *Center* helps innovators by evaluating their creations and then refining them for introduction into the marketplace. A team of evaluators rates each invention on the basis of thirty-three criteria concerning societal, market, and business risk factors.

The *Center* helps the innovator either to go into business for himself or to sell or license his concept.

Regis' Office of Development Assistance screens, collects, and clears clients for the *Center*. The *Center* has received financial support from Gulf States Utilities, Commerce and Industry, and the *LSU* Small Business Development Center.

Open to everyone, including *LSU* faculty and staff, the *Center* renders services in five major areas including invention, evaluation, management and technical assistance, venture formation, and technology transfer assistance, and education and research.

## BOOK CORNER

(continued from page 6)

quent chapters present studies of seven programs that are potential candidates for either new or increased government fees. These include ports and harbors, inland waterways, U.S. Coast Guard activities, aviation services, certain postal services, irrigation water resources, and the Strategic Petroleum Reserve.

Each chapter gives an overview of the existing federal program and describes the plan for user charges. While there is no consistent pattern for presenting the findings in each chapter, most provide the effect of user fees on the service performed on both the economy and the industry affected.

The authors, Congressional Budget Office Natural Resources and Commercial Division staff members, claim their study is impartial and devoid of recommendations. The initial chapter does, indeed, describe both the advantages and limitations of user fees. Each of the chapters describes both positive and negative effects associated with user fees.

The programs covered in the seven chapters are not the only ones amenable to the fee recovery approach. They do illustrate, however, the range of programs by which the government could attempt to recover some or all of the costs associated with service operations. The study serves to inform policy makers and citizens of the possible benefits or hardships for various economic sectors resulting from charging user fees.

—Smittie Bolner

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## RESEARCH NOTES

### LSU Innovation Center

The *LSU Innovation Center* has begun its second year of evaluating inventions with regard to their potential for introduction into the marketplace a part of an overall state effort to expand Louisiana's economic base and employment opportunities.

Director Ben Kedia, who also serves the *University* as an associate professor of management, believes encouragement of innovation can

## FORUM

# Annual Report Research: Implications for Writers



### Recent Research

The annual report to investors has been subjected to examination from a variety of perspectives. Managers, investors, regulators, and academic researchers, queried about their opinions regarding such reports, all demonstrated concern about content. This article emphasizes the managerial viewpoint, summarizes some recent research relevant to corporate annual reporting, and provides practical suggestions to aid report editors in preparing more effective publications for their organizations.

Management believes it is crucial for the expensive and time-consuming process of preparing, disseminating, and digesting annual reports to be worthwhile—that is, such reports should offer benefits which more than compensate for their costs. Annual reports, therefore, often do more than simply present financial data regarding the past profitability of the firm. They also interpret financial data while providing information on managerial plans for the firm's future. It is important that these data bases provide comparable and easily accessible information for the investing public, since an organization may make resource allocation decisions on the basis of its report.

An important role of the financial annual report is that of establishing a framework for assisting investors in forecasting future profitability. Various other information sources exist for the investor—sources which may appear more forward-looking, less biased, or more quantitatively specific. Nevertheless, researchers continue to find support for the premise that the annual report is a significant, if not the most important, source of investor information.

Researchers Lucia S. Chang and Kenneth Most recently completed questionnaire research attempting to identify the usefulness of the traditional corporate annual report to individual investors, institutional investors, and financial analysts. They report:

*"... all three groups in the USA ... rated the annual report as their most important source of investment information."*<sup>1</sup>

The Securities and Exchange Commission (SEC) also places importance on the annual report and is involved in a continuous effort to improve the quality and quantity of information contained in these documents. Some rules, for example, were adopted by the Commission in August 1980, which were

*"... intended to make the report to holders the basic disclosure document and to avoid duplicating that information in filing with the agency."*<sup>2</sup> Harold Williams, former SEC chairman, has said this group of rules is *"by far the single most important advance"* in simplifying the SEC's disclosure system.<sup>3</sup>

The recent trend in SEC guidance provided to writers of annual reports has been toward broad guidelines, rather than specific rules. Requirements of *Item 11 of Regulation S-K* exemplify this move toward generalization. It is effective for management's discussion and analysis of financial conditions and results of operations for annual reports issued after December 15, 1980. Here the SEC indicated its requirements were

*"... intentionally general and nonspecific in order to encourage registrants' initiative in discussing those matters most significant to individual circumstance."*<sup>4</sup>

Rather than direct the analysis toward percentage comparisons by year for income or other financial items, the SEC now requires

*"... information on financial conditions as well as operations, with an emphasis on liquidity, capital resources and the impact of inflation, and, within each of those areas, a focus on trends and material changes, events and uncertainties."*<sup>5</sup>

The SEC reviewed a number of 1980 disclosures and issued releases to discuss the result of this research and provide an assessment of the initial responses to the new requirements of the section entitled *"Management's Discussion and Analysis of Financial Condition and Results of Operations."*<sup>6</sup> The quality

of discussion was a major improvement.

Many registrants focused their operational results analyses on segment data and information about significant events and trends. These analyses resulted in presentations which were generally more readable and informative than previous mechanical discussions of percentage line item changes. Financial conditions and changes in financial condition were given extensive scrutiny by the registrants, who provided considerably more information and in a greater variety of formats than in the past. The SEC also remarked on the discussion provided by firms of other economic, industry, and specific company factors and uncertainties relevant to an accurate understanding of operations and financial condition.

A number of registrants also elected to include forward-looking information which is encouraged, but not required. According to the SEC:

*"Forward-looking disclosures were most frequent in the area of expenditures which are by nature future oriented. However, certain registrants also provided forward-looking information with respect to operations and liquidity. The disclosures, which varied from brief comments to broader discussions, including in some cases a five-year forecast of revenues and cash flow, demonstrated that the discussions need not be quantitative to be meaningful."*

The Commission Staff generally was pleased by the results of the new requirements and did not see the need for more specific requirements at this time. As the Staff indicates:

*"... registrants may benefit from seeing a sample of different approaches to the various disclosure requirements, especially in the more novel disclosure areas."*<sup>8</sup>

Some firms may develop new formats for presenting their information

more effectively even though the guidelines remain in force. Comparisons of a variety of presentations therefore eventually may indicate one mode of presentation to be superior to others. A required format then might seem appropriate.

### Management Reports

*Management Discussion and Analysis* is not the only section of the annual report to receive some recent attention. The *Management Report* also is an area of special interest on which the American Institute of Certified Public Accountants (AICPA) places a great deal of importance.

The Commission on Auditors' Responsibilities (*Cohen Commission*) of the AICPA recommended that communication about management responsibilities for financial statements be improved. The Commission took the position that some users have the erroneous opinion financial statements are representations of the auditors, not management. The Commission concluded:

*"At present, management is not required to report on financial statements, although it is responsible for the representations in them. It is incongruous that the party responsible for the representations does not have to acknowledge its responsibility and that the only report on the statements may be the auditor's."*<sup>9</sup>

Firms increasingly are including a report by management in their annual reports. In a recent survey of 700 annual reports, it was found

*"244 or 35 percent of the annual reports included a management report, an increase of 42 percent over 1979 when 172 or 25 percent of the same 700 enterprises included a management report."*<sup>10</sup>

An interesting point is that the *Management Report Section* is not always signed. Only 133 reports (55 percent) were signed out of the 244 management reports in the sample survey.<sup>11</sup> The lack of signatures

transmits a contradictory signal to the reader, since one of the purposes of these reports is to acknowledge responsibility.

The AICPA *Special Advisory Committee on Reports by Management* recommends that the *Management Report* be close to the financial statements but not included in their notes.<sup>12</sup> Such a management representation of responsibility is not required by the SEC; however, the Committee recommends such a report be published and that it include

*"... information and representations on (1) the financial statements, (2) internal accounting control, (3) the audit committee, and (4) the independent auditor."*<sup>13</sup>

It also encourages appropriate concise and nonrepetitive discussion of related topics.<sup>14</sup>

Various other parts of annual reports also have been subject to recent study and research. Edward W. Bowman, an academic researcher, has used a technique known as *content analysis* in his studies of annual reports. According to Bowman:

*"content analysis involves a systematic counting, coding, and classification of various words or phrases from written reports for purposes of testing or explicating some underlying phenomena."*<sup>15</sup>

Bowman frequently has used content analysis methodology to examine corporate annual reports and to investigate such aspects as new product development, corporate social responsibility, international activities, governmental relations, strategic planning, litigation, and customer orientation. These studies generally indicate, he reports, that annual report discussion tends to correspond with real activity.<sup>16</sup>

He shows in one study, for example, that annual report discussion on the topic of corporate responsibility (determined through content

analysis) was in fact a "real" indicator of performance. Bowman also investigated the hypothesis that troubled companies take more risks. He selected the container industry for his study, counting the instances "new" was used in the president's letter at the beginning of each report. Bowman reasoned the word "new" could be associated with risky and unknowable things; therefore, it is an acceptable surrogate for risk taking. His findings supported the hypothesis, although the sample admittedly was small and there was an appreciable amount of variance in it.<sup>17</sup>

Bowman's kind of research provides support for the management argument for using the annual report as a tool to communicate a message to the investing public. Useful information may be found in such reports by careful readers, despite what critics may claim. As Bowman points out:

*"Many may believe that annual reports, especially the discussions and descriptions, are of little value. Our position is that sufficiently careful work can turn what is apparently base metal into gold*

*..."*<sup>18</sup>

Efficient market research (based on the claim that "new" information is instantaneously incorporated into stock prices) tends to undermine the usefulness of annual reports, in that annual reports generally do not convey information that is completely "new." Bowman's work raises the possibility that this view may be too restrictive.

Annual reports may not provide "new" information in terms of results that are purely financial; however, they may convey other kinds of qualitative information such as customer orientation, strategic planning, and governmental relations. Since investors do not make decisions based on financial results alone, it may be the case that knowledge of these qualitative aspects of the firm is vital to financial decision

Figure 1

## (STRUCTURE OF DATA FLOWS)

|                                    |                                                    |
|------------------------------------|----------------------------------------------------|
| Financial                          | <i>Broad, descriptive, comparative information</i> |
| Management's Discussion & Analysis | <i>Emphasis on special, non-recurring events</i>   |
| Financial Statements               | <i>Quantitative financial data for the period</i>  |
| Reports from Management & Auditors | <i>Responsibility</i>                              |
| Notes                              | <i>Explanatory detail</i>                          |
| Supplemental or Unaudited Data     | <i>Additional information</i>                      |

making. Thus it appears that the huge amounts of time, money, and energy firms invest in annual reports are worthwhile allocations.

## Content Analysis

Annual report writers may wish to follow Bowman's direction by undertaking a content analysis of their own reports and perhaps those of other firms in the same industry. The techniques of content analysis, discussed in the previous section, may be of some assistance here. We suggest preparers examine the reports' content, tone, style, and format to make their comparisons.

Content analysis can yield some interesting results. The format and content of traditional financial statements may be quite standardized, but preparers usually will find quite a variety in the verbal (rather than the quantitative) sections of the report. For example, the notes to the financial statements and the management discussion and analysis section of the report may differ greatly from one firm to another. Knowing about these differences, as well as trying to discover their origins and effects, can be helpful.

Preparers may discover they have been choosing a word pattern that communicates an undesirable "hidden" message, or that they have failed to make use of a word pattern that could more successfully communicate a "correct" idea. Language is a powerful instrument, and preparers of annual reports should make sure they use this instrument with maximum effectiveness. Content analysis can help guide them toward this goal.

We recommend the development of an organizational scheme for presenting the data in the annual report's financial section. The information should be structured in such a way that the data flows from a broad verbal interpretation of significant items and events through the statements themselves to more specific data contained in notes or supplemental information. Figure 1 depicts such an organizational scheme.

The user, in this kind of approach, is first informed of the elements considered to be significant by management. He then can examine the statements already apprised of what he should be looking for. Detailed information or calculations follow-

ing the statement can serve as explanation for the reader to follow up as desired.

A cross-reference system throughout the financial section would aid in the coordination of data flow. This hopefully would provide a consistent framework for the data base and allow new information to be inserted without disrupting previously developed data flows. The framework we suggest may help by presenting a coordinated information system which can more easily assimilate and adapt future requirements.

A table of contents should be provided at the beginning of each annual report; and page number locations should be referenced, as a minimum, along the lines of organization presented by Figure 1 for the following annual report sections: financial review, financial statements, management's discussion and analysis, management and auditor reports, notes, and unaudited and supplemental data. Other significant items outside of the financial section (for example, description of operations, letter to stockholders, price range of stock) should be referenced in the table of contents as well.

It is quite a challenge for preparers of annual reports to present a coordinated and meaningful data base without burdening readers with information overflow. As preparers strive to present this data base in clear, concise, yet not unduly complex language, we urge them to consider Mark Twain's observation:

*"I never write 'metropolis' for seven cents a word because I can get the same price for 'city.'"*<sup>19</sup>

William Blundell, in an article in *The Wall Street Journal*, points out consultants who teach writing at the corporate level urge their clients to shorten sentences, question big words, and use the active voice. Blundell's brief article provides a number of helpful hints to the corporate writer.<sup>20</sup>

He notes, for example, people prefer to read well below their educational levels, and he provides a system for enabling writers to determine the educational levels their work is serving. Blundell discusses and illustrates how to compute a "fog index" (according to the Gunning-Mueller Clear Writing Institute at Santa Barbara, California), which is a measure of the number of years of schooling needed to understand a piece of writing.

Blundell points out:

*"Professionals write simply. J. D. Salinger's widely praised novel, The Catcher in the Rye, has a fog index of six—the same as the nation's biggest magazine, TV Guide. The Wall Street Journal averages about eleven, roughly the same as Time and Newsweek."*

Writers of corporate annual reports would do well to compute their own "fog index" in order to determine how well they may be meeting the needs of their audiences. Investors may tune out and not receive the desired message if the writing is at too high a level.

## Conclusion

Recent guidelines permit more latitude for firms to tell their own stories via annual reports. Hopefully firms are interpreting these guidelines responsibly. Continued study of the interpretation of these guidelines is necessary, so that the sum of stories told in annual reports is meaningful to investors. Improving communication between the corporate community and the public is a goal of the first magnitude. The annual report holds tremendous potential for helping achieve this end, so it is worthwhile for firms to devote attention, study, and resources to the form and substance of this vital document.

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## ENDNOTES

<sup>1</sup>Lucia S. Chang and Kenneth Most, "New Light on the Annual Report," *Collegiate Forum* (April 1979), p. 12.

<sup>2</sup>"SEC Adopts Proposals That Will Increase Data for Holders, Simplify Other Filings," *Wall Street Journal*, August 22, 1980, p. 36.

<sup>3</sup>Ibid.

<sup>4</sup>SEC Docket, Vol. 23, No. 13, October 13, 1981, p. 962.

<sup>5</sup>SEC releases No. 6349 and No. 18120, "Management's Discussion and Analysis of Financial Condition and Results of Operations," September 28, 1981. SEC Docket, Vol. 23, No. 13, October 13, 1981, p. 963.

<sup>6</sup>Ibid.

<sup>7</sup>Ibid.

<sup>8</sup>Supra, p. 964.

<sup>9</sup>American Institute of Certified Public Accountants, *Commission on Auditors' Responsibilities, Report, Conclusions, and Recommendations* (New York: AICPA, 1978), p. 16.

<sup>10</sup>Steven J. Golub, "Management Reports: Growing Acceptance," *Financial Executive*, December, 1981, p. 27.

<sup>11</sup>Golub, p. 28.

<sup>12</sup>American Institute of Certified Public Accountants, *Special Advisory Committee on Reports by Management, Conclusions and Recommendations on Reports by Management* (New York: AICPA, 1979), p. 2.

<sup>13</sup>Ibid.

<sup>14</sup>Ibid.

<sup>15</sup>Edward H. Bowman, "Risk Seeking by Troubled Firms," *Sloan Management Review*, p. 37. In this article, Bowman discusses a specific study on risk utilizing the methodology of content analysis; in addition, he provides insight into this technique and summarizes a number of studies in which it is used. Both this paragraph and the next one draw heavily on this article. The interested reader also is referred to "A Strategic Posture Toward Corporate Social Responsibility," by Bowman and Mason Haire, *California Management Review*, Winter, 1975.

<sup>16</sup>Ibid.

<sup>17</sup>Ibid.

<sup>18</sup>Bowman, "Strategy Annual Reports, and Alchemy," *California Management Review*, Spring, 1978, p. 70.

<sup>19</sup>This quote is taken from William E. Blundell's article, "Confused, Overstuffed Corporate Writing Often Costs Firms Much Time—and Money," *The Wall Street Journal*, August 28, 1980, p. 21. The following paragraph also draws heavily from this article.

<sup>20</sup>Ibid.



### Worker's Comp Is Increased

The maximum and minimum benefits schedules under the Worker's Compensation statute increased effective September 1, 1984 under an amendment passed by the 1982 legislative session. Labor Secretary Dudley J. Patin says maximum benefits were raised for injured workers from two-thirds of the statewide average weekly wage to three-quarters. The amendment also decreased Worker's Compensation insurance rates by 20 percent. Maximum benefits for worker's increased from \$245 to \$248, and the minimum went from \$65 to \$66.

### Hiring Plans Studied

A national opinion poll indicates sales and marketing employment in the Southwest region, including New

Orleans, will remain healthy through the end of the year. Sales Consultants, Inc., polled more than 1,400 executives to project their hiring plans for the fourth quarter, and 50.3 percent of those surveyed in the Southwest region (Arkansas, Louisiana, Oklahoma, and Texas), indicated they were planning to expand their sales and marketing staffs during the period. Another 40.7 percent in the region said they would maintain present staff levels and only 9.0 percent planned staff reductions. Nationally, 40.2 percent of those polled were planning to increase staff size; 44.3 percent said they would maintain staff size; and 14.9 percent indicated possible reductions.

### Bar Association Posts Filled

Mary Ann Coffey, a business litigation partner with the New Orleans firm of Lemle, Kelleher, Kohlmeier, Hunley, Moss, and Frilot, has been named chairman of the state action subcommittee of the Section of Anti-trust Law of the American Bar Association. She also has been appointed chairman of the Clients' Security Fund Committee of the Louisiana State Bar Association.

### State's Health Care to Change

The organization and operation of Louisiana's health care delivery system will change dramatically in the next ten years, and the impact on health care providers, on payors, and particularly on patients, will be enormous, according to a new study by Arthur Andersen & Co. Walker Tucei, a company partner stationed at New Orleans, says the study indicates *"the coming decade is one of great promise for the health care industry. Competition will increase among hospitals, and between the hospitals and other kinds of providers."* The eight-month study, *Health Care in the 1990s: Trends and Strategies*, predicts significant changes in the organization, operation, and financing of hospitals. These predicted changes will affect physicians and other health care personnel as well as patients. Copies of the report

are available for \$65 (\$50 for ten or more) from Arthur Andersen & Co., *Health Care in the 1990s*, c/o Compuletter, 5616 N. Western Ave., Chicago, IL 60659.

### Hospital Is Accredited

Earl K. Long Memorial Hospital at Baton Rouge has been accredited for three years by the Joint Commission on Accreditation of Hospitals (JCAH). The private, non-profit organization represents the hospital and medical industry in a voluntary, self-policing activity, and develops minimum standards for quality of care in the various types of hospitals throughout the United States. Accreditation by JCAH is necessary for maximum reimbursement from the federal government and many other third-party payors. It is also important to teaching institutions for approval of medical school residency programs. Earl K. Long is a teaching facility for the *LSU School of Medicine*, and serves as a clinical site for nursing students and others training in the various allied health professions.

### Agency Gets New Name

The State Office of Health Services and Environmental Quality, part of the Department of Health and Human Resources, has been renamed the Office of Preventive and Public Health Services. Agency officials say the creation of the Department of Environmental Quality created confusion with the old name, and the new one emphasizes the preventive aspect of that office's programs.

### Energy Innovation Awards Made

The U.S. Department of Energy presented national awards for energy innovation to four Louisiana projects. Awards were made to the following projects: Lou Ana Foods Energy Conservation, Lou Ana Foods, Inc. of Opelousas; USHOP, One Universal Spirit-Ashrama of Greensburg; Cade Energy Home, Louisiana Department of Natural Resources; and Passive Solar Research

House Project, School of Architecture, College of Design, *LSU*.

### **Odometer Fraud**

Four state offices are coordinating to stamp out odometer fraud, which Attorney General William J. Guste Jr. claims is an enormous problem. The Department of Justice, Office of Consumer Protection, Office of Motor Vehicles, and the Louisiana State Police are working closely together in the investigation and prosecution of odometer fraud cases. Officials estimate U.S. consumers lose more than \$2 billion annually from such cases. Guste warns used car buyers to examine the cars carefully, talk with previous owners, or check registration records to confirm that the odometers have not been rolled back to reflect fewer miles. Consumers who believe they have purchased vehicles with altered odometers should contact the Office of Motor Vehicles Safety and Enforcement Section at (504) 925-4765.

## **SHIPS & SHIPPING**

### **Tangi Port Facility**

Tangi-Trans Port, Inc. has announced it intends to operate a barge terminal facility at Pass Manchac, seven miles south of Ponchatoula on property that belongs to the South Tangipahoa Port Commission. According to terminal operator Tom Barrios: *"We expect that by 1990 nearly 200,000 tons of cargo will move through this port. The warehouse complex located on the site will be able to accommodate nearly 130,000 tons of general cargo forecasted to pass through the facility."* A feasibility study was conducted by the *LSU* Ports and Waterways Institute.

### **Trade Route Expansion**

Antilles Lloyd, Ltd. has announced expanded trade routes from Baton Rouge to Curacao; Aruba; Santo Domingo; Barbados; Trinidad; and Georgetown, Guyana; Cristobal and Las Minas, Panama; and Santo

Tomas de Castillo, Guatemala. The line is managed by Gulfship Marine, Inc., of New Orleans; and Sea Navigation, Inc. of Houston.

### **Port Study Is Underway**

An \$81,000 contract to develop a master plan for the Port of Greater Baton Rouge has been awarded to Louis Berger International, Inc., of East Orange, N.J., in association with the *LSU* Ports and Waterways Institute by the Port Commission. It is expected to be delivered to the Commission approximately next spring.

### **St. Mary Gets Warehouse**

The West St. Mary Harbor and Terminal District has authorized the drafting of plans and specifications for a new 10,000-square-foot general purpose warehouse at the Port, according to Executive Director Gary LaGrange. The building is part of an effort to develop the port's public facilities, and eventually will include rail transfer capability. Construction is scheduled for completion this fall.

### **New Terminal Commission**

The Legislature this year created the Bulk Cargo Offshore Terminal Commission. The main objective of the five-member commission will be to provide a single public body at the state level to promote and participate in the development of offshore bulk handling facilities. The Commission's first project will be to implement the proposed \$35 million deep-water bulk cargo port at the mouth of the Mississippi River at South Pass.

### **Foreign Trade Zone**

The Caddo-Bossier Port Commission has announced it is preparing an application for a grant of authority to establish a foreign trade zone and several subzones in the Shreveport-Bossier vicinity. Extensive economic, financial, and physical requirements must be met before a zone is authorized by the federal For-

eign Trade Zone's board. The number of U.S. ports of entry with zone projects has grown from ten to seventy-five in the past decade, and the value of goods entering zones and subzones has increased from just over \$100 million to more than \$3 billion.

### **Fourchon Contracts N.O. Firm**

Port Fourchon has entered into a five-year marketing and stevedoring contract with Thomas Trading Company of New Orleans to help attract shipping business to the Greater Lafourche Port Commission facility.

### **L.P. Port Is Developing**

Some thirty new jobs have been created at the Port of Lake Providence as a result of an expansion program designed to build a 30,000-square-foot bulkhandling pad. The concrete pad, which will be used to store gravel, sand, coal, and crushed rock, is scheduled to become operational this fall. Its construction was made possible by a \$244,000 grant from the Louisiana Department of Transportation and Development.

### **N.O. Port Activity Is Up**

The Port of New Orleans showed a considerable increase in most cargo categories in the first half of 1984 over similar period figures in 1983. Total cargo was up 35 percent over the previous year's volume. Plans reportedly are underway to construct two container terminals on the Mississippi at the Louisiana Avenue Wharf and in St. Bernard Parish. These would accommodate vessels with drafts up to forty feet.

### **Container Facility Is Planned**

An intermodal container transfer facility is being planned for the west bank of the Mississippi River in St. Charles Parish by the South Louisiana Port Commission (*SLPC*). The *SLPC* recently obtained an option for the 2,000-acre site located at the foot of the new Mississippi River Bridge at Luling. It is served by two railroad

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lines and three major highways.

## COMMERCE & INDUSTRY

### Kaiser Says Will Reopen

Cornell Maier, Kaiser Aluminum & Chemical Corporation board chairman, recently assured Governor Edwards and Secretary of Commerce Faucheux at INSITE '84 in San Francisco that the firm will reopen the recently closed parts of its Chalmette operation as soon as "*international market forces improve*." The plant, which employs some 1,500 workers, formerly had 5,000.

### Cooking Up Jobs

Governor Edwin Edwards and Secretary of Commerce Ron Faucheux went to San Francisco in October to host a series of special VIP receptions for the nation's key executives and corporate decision-makers at the INSITE '84 Conference and Exposition. They demonstrated a sure instinct for doing the right thing by taking renowned French Quarter Chef Paul Prudhomme along to tie in with the Department of Commerce & Industry's exhibit theme, *Louisiana: A Recipe for Success*. Prudhomme, whose K-Paul's Louisiana Kitchen has become a New Orleans culinary landmark, prepared some of his famous creole specialties to the delight of hundreds of reception guests.

Faucheux also transported his department's impressive Business Briefing Computer Center to San Francisco. The center houses a combined data processing/video computer system which provides hard, concise information about specific Louisiana sites and other resources for prospective business and industrial development. "INSITE '84," Faucheux said, "*allowed Louisiana exhibitors an opportunity to meet with key executives in a controlled, business-like environment, affording decision makers access to information on Louisiana sites, facilities, transportation, investment options, new markets, cost-efficient produc-*

*tion, and the favorable tax climate.*"

### LASBEC Names Director

Jean B. Armstrong has been named executive director of the Louisiana Small Business Equity Corporation (LASBEC). The organization works within the State Department of Commerce to encourage greater private investment, long-term lending, and other public and private financial assistance for the sound financing of small business in Louisiana as a means of providing high levels of employment and income growth, expanded social and economic opportunities, and increased state revenue. Ms. Armstrong previously served as the Commerce Department's petrochemical marketing director.

### Telecom Firm Locates at N.O.

Interline Communication Services, Inc., a new national telecommunications management firm seeking to fill the service void created by the breakup of American Telephone and Telegraph, has opened an office at New Orleans to serve business, government, and non-profit organizations throughout the state. Multi-office facilities are planned for the area during the next five years. Company officials say each will employ some 120 workers.

The first satellite will open later this year at Baton Rouge with a facility scheduled to begin operations at Mobile during the first quarter of 1985. The office, one of thirty across the nation, will provide installation and maintenance of telecommunications systems; coordination of adds, moves, and changes; premise wiring; and installation of terminal equipment.

### C&I Approves Exemptions

The State Department of Commerce & Industry Board says some 2,797 permanent and 14,396 construction jobs will result from projects it approved for tax incentive programs last summer. The Board

also tightened its rules to ensure that Louisiana workers, suppliers, and contractors will be utilized by the industries benefitting from those exemptions. Projects approved for the ad valorem industrial exemption represents \$38.9 million in industrial investment for three new plants and seventy plant expansions, providing payrolls of more than \$118.8 million.

### Mini-series Set for State

A fourteen-hour mini-series is one of several projects scheduled to be filmed on location in Louisiana, according to the Louisiana Film Industry Commission. The film *Going to the Alamo* will be made almost entirely in Louisiana, excluding the final scenes which involve the actual battle. Rex Sparger and David Dortort are producing the \$17.5 million television drama. Shooting is expected to begin in early 1985 around New Orleans.

Other state film projects for the coming year include a 1920s gangster story, *Wild Red Feet*, by Sam Peckinpah and Gregg Sutton; and a t.v. pilot, *Super Cop* by New Orleans native Elmore Leonard. Film producers are expected to spend more than \$100 million in Louisiana during 1985.

### Chain Expands into State

Fifty new RAX Restaurants will be opening throughout Louisiana during the next five years, adding \$50 million to the state's economy and providing jobs for more than 2,200 restaurant employees. Secretary of Commerce Faucheux announced: "*The capital investment for each restaurant is approximately \$500,000, and each restaurant has forty-five employees with an annual payroll of \$200,000. The RAX Restaurant expansion into Louisiana is a significant boost to the state's economic development and will provide 2,000 jobs.*" RAX Southern, Inc., is a division of the Calibre Corporation of Columbus, Ohio.

# IN APPRECIATION

The **Louisiana Business Review**, a quarterly publication of the Division of Research in the College of Business Administration at Louisiana State University, is dedicated to providing worthwhile and timely information on local, state and national economic developments of interest to members of the Louisiana business and government communities. This objective is being achieved by presenting high quality, readable articles written by knowledgeable representatives from business, government and academia. The Division would like to express its sincere appreciation to the following companies whose valuable contributions have made this publication possible.

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